4. SAN DIEGO TO POINT ARGUELLO, CALIFORNIA

(1) This chapter describes the 240-mile irregular coast of southern California from the Mexican border to Point Arguello. The coast extends in a general NW direction and includes the major ports of San Diego, Long Beach, Los Angeles, and Port Hueneme. This chapter also describes the recreational and fishing ports of Oceanside, Newport Beach, Ventura, Santa Barbara, and the many other recreational boating ports on San Pedro and Santa Monica Bays and along the Santa Barbara Channel.

(2) **COLREGS Demarcation Lines.**–The lines established for this part of the coast are described in **80.1104 through 80.1126,** chapter 2.

(3) **Chart 18022.**–There are several islands and dangers from 7 to 100 miles off the southern California coast; they are described in chapter 5.

(4) Many restricted and danger areas are in these waters. (See **334.860, 334.870, 334.880, and 334.890**, chapter 2 for limits and regulations.) In addition, missile firing, gunnery, and bombing operations are conducted on and over offshore waters not included in the areas defined in chapter 2, and at times endanger surface vessels. Information about these areas is published in Local Notice to Mariners issued by Commander, Eleventh Coast Guard District, Alameda, CA, and Notices to Mariners issued by National Imagery and Mapping Agency, Washington, D.C.

(5) Vessels are requested not to tow submerged objects across charted submarine transit lanes in use off the coast of southern California.

(6) **Weather, San Diego to Point Arguello**.–The mild climate from San Diego to Point Arguello is controlled by the Pacific high-pressure system. Aided by the sea breeze, it brings winds from off the water, mainly S through N, which help keep coastal temperatures up in winter and down in summer. Coldest average temperatures range from the middle to upper fifties (12.8° to 15.0°C), while summertime readings are most often in the seventies (22° to 16°C). Occasionally a hot dry flow off the land in autumn will cause temperatures to soar into the nineties (33° to 38°C), and a rare winter outbreak from the E can drop temperatures to below freezing (<0°C). Winter is the rainy season, although not much rain falls along these coasts.

(7) Strong winds and rough seas, while less frequent than farther N, can be a problem from the middle of fall through late spring. Strong pressure gradients, distant storms, and infrequent close storms account for most of the gales and seas of 12 feet (3.7 m) or more, particularly off Point Arguello and in the Santa Barbara Channel. Strong local winds (Santa Ana) also generate gales along sections of this coast.

(8) Advection or sea fog, formed by warm moist air flowing over cool water, frequently confronts mariners in these waters. It is a persistent and widespread problem, particularly in the summer and fall N of Santa Monica, and in fall and winter S of Santa Monica.

(9) **Charts 18740, 18765.**–In clear weather, vessels coming from S will sight Table Mountain, and its surrounding high land, and Los Coronados before picking up the San Diego landmarks.

(10) **Table Mountain** (chart 18022), conspicuous and flat-topped, is in Mexican territory, 25 miles SE of Point Loma and 6 miles inland.

(11) **Los Coronados (Coronado Islands)** are four bare, rocky islands, extending 4.5 miles in a NW direction, 7 miles offshore in Mexican waters, and 15 miles S of Point Loma. These islands are prominent in clear weather, and the passage E of them is commonly used by vessels. Depths in the vicinity of the islands are irregular, and in thick weather or at night caution must be observed when near them.

(12) A light is shown from a white cylindrical masonry tower on the S end of the S island; it is obscured from certain directions by the N islands. Another light is shown from a white square masonry tower near the N end of the S island; local fog sometimes obscures it.

(13) The boundary between the United States and Mexico is marked by a 14-foot white marble obelisk on a pedestal 41 feet above the water near the edge of a low table bluff. The visible marker is 200 yards from the beach and 10 miles 142° from Point Loma Light. A large circular concrete arena is conspicuous just S of the marker. A stone mound, 365 feet above the water and 1 mile E of the obelisk, marks another point on the boundary line. Directly N of the obelisk the mesa falls to the low marshy land S of San Diego Bay.

(14) About 1.5 miles N of the border at Imperial Beach is a fishing pier extending 400 yards to seaward. In April 1984, the outer end of the pier was reported to have been destroyed; caution is advised when in the area.

(15) In the approach from seaward in clear weather, San Clemente Island, the southernmost of the off-lying islands, will be sighted before the distinguishing features of the coast are seen. This will check the vessel's position and indicate subsequent shaping of the course for Point Loma. Upon a nearer approach, Cuyamaca Peak and the high land of the interior, Los Coronados, and Point Loma will be distinguished. Several aerolights in the vicinity of San Diego are visible at night from seaward.

(16) When making the approach to San Diego, useful radar targets are San Clemente Island, Los Coronados, the pleasure piers at Imperial Beach and Ocean Beach, the jetties of Mission Bay, Point Loma, and Ballast Point.

(17) When entering the harbor, the buoys marking the channel and Ballast Point are easily identified targets, thence Shelter Island, the radar reflector on North Island, and the various piers on either side of the channel; thence Harbor Island, the Coast Guard station pier, B Street Pier, and the Tenth Avenue Marine Terminal.

(18) **Charts 18773, 18772.–San Diego Bay,** where California's maritime history began in 1542, is 10 miles NW of the Mexican boundary. In September of that year, Juan Rodriquez Cabrillo, the Spanish explorer, sailed his frail bark into the bay. The bay is considered one of the finest natural harbors in the world, and affords excellent protection in any weather; it is free of excessive tidal current movements. A low, narrow sandspit, which expands to a width of 1.6 miles at North Island on its NW end, separates the bay from the ocean.

(19) The waters off the entrance to San Diego Bay are included in **restricted areas**. (See **334.880 and 334.890**, chapter 2, for limits and regulations.)

(20) The city of **San Diego** is on the NE shore of the bay. **Coronado** is on the sandspit opposite San Diego. **National City** and **Chula Vista** are S of San Diego on the SE shore of the bay. The principal wharves are at San Diego and National City. Coronado, connected to San Diego by a highway bridge, is a residential and resort area of little commercial importance.

(21) **Prominent features.**–**Point Loma**, on the W side of the entrance to San Diego Bay, is a ridged peninsula with heights of about 400 feet. The ridge is bare of trees except in the gullies and where planted around the houses near the summit, and is sparsely covered with grass, sagebrush, and cactus. The tanks and buildings of a sewage treatment plant are conspicuous about 0.9 mile N of the point. At a distance the point usually has the appearance of an island. **Point Loma Light** (32°39'54"N., 117°14'34"W.), 88 feet above the water, is shown from a black house on a 70-foot white cylindrical tower at the S end of the point. The station has a fog signal. Thick kelp beds extend more than 1.5 miles S of the point, and a sunken wreck is about 0.5 mile S of the point.

(22) On the nearer approach, the abandoned lighthouse will be seen on the highest part of the hill immediately back of Point Loma Light. The old lighthouse and grounds form the **Cabrillo National Monument,** honoring the discoverer of San Diego Bay. The statue of Cabrillo, about 300 yards NE of the abandoned lighthouse, is reported to be an excellent mark when fog obscures the old lighthouse. From inside the bay, the beige cylindrical base of a dismantled radiotelescope is prominent 1.5 miles N of Point Loma Light. Other prominent objects along the crest of the ridge are a large red and white checkered elevated tank, a green standpipe, and a tall lookout tower all about 2.5 miles N from the light.

(23) **North Island,** the filled NW end of the sandspit on the E side of the bay entrance, is Naval Base Coronado. On its SE side is the city of Coronado. Prominent features that show up well from the entrance are the tall condominiums at Coronado Shores 2.7 miles E of the entrance, the S tower of Hotel del Coronado 2.4 miles E of the entrance, and the tower of the Naval Air Station Administration Building, which is surmounted by an aerolight and is operated intermittently with varying characteristics. In clear weather the skyline of the city of San Diego is very prominent on the S approach.

(24) A **restricted area** is adjacent to the W side of North Island. (See **334.870**, chapter 2, for limits and regulations.)

(25) **Security zones** are adjacent to the W and NE sides of North Island. (See **165.1 through 165.8, 165.30, 165.33, 165.1104, and 165.1105**, chapter 2, for limits and regulations.)

(26) **Ballast Point,** low and sandy, projects 0.4 mile NE from the E side of Point Loma, 1.3 miles N from Point Loma Light. **Ballast Point Light B** (32°41.2'N., 117°14.0'W.), 16 feet above the water, is shown from a dolphin with a green and white diamond-shaped daymark off the end of the point; the station has a fog signal. Three piers of the Navy submarine facility are just NNW of Ballast Point. A fog signal is on the middle pier.

(27) The area adjacent to the Naval Submarine Base at Ballast Point and extending E across the channel to the shore at the North Island Naval Air Station is a **regulated navigation area.** (See **165.1 through 165.13 and 165.1107,** chapter 2, for limits and regulations.)

(28) A jetty extends 1 mile S on **Zuniga Shoal** from **Zuniga Point,** the SW extremity of North Island. The outer two-thirds of the jetty has only small sections visible at high water; the submerged jetty is marked by lights and by a light and fog signal at its seaward end. The three lights marking the middle of the jetty display a white daymark with orange borders and the words "DANGER SUBMERGED JETTY."

(29) **Restricted areas** of a degaussing station are between Ballast Point and Zuniga Point, and N of Ballast Point. (See **334.870**, chapter 2, for limits and regulations.)

(30) A submerged jetty extends about 220 yards W from Zuniga Point.

(31) In 2000, a rock awash was reported about 80 yards NW of the northernmost degaussing platform on the W side of North Island.

(32) **Security zones** are on the W side of the entrance to San Diego Bay immediately N of Ballast Point, about 1 mile N of the Point, and on the E side of North San Diego Bay at the Navy Pier. (See **165.1 through 165.8, 165.30, 165.33, 165.1102, 165.1103, and 165.1121**, chapter 2, for limits and regulations.)

(33) A **safety zone** is E of Harbor Island on the N side of the bay. (See **165.1 through 165.8**, **165.20 through 165.23, and 165.1106**, chapter 2, for limits and regulations.)

(34) **COLREGS Demarcation Lines.**–The lines established for San Diego Harbor are described in **80.1104**, chapter 2.

(35) **Channels.**–A Federal project provides for depths of 42 feet through the entrance to the turning basin on the NE side of North Island, thence 40 feet from the turning basin to the SE corner of the 10th Avenue Marine Terminal, and thence 35 feet to a basin SW of the 24th Street Terminal. (See Notice to Mariners and latest editions of the charts for controlling depths.)

(36) **Anchorages.**–General anchorages, special anchorages, and anchorages for Government vessels have been established in San Diego Bay. (See **110.1, 110.90, and 110.210,** chapter 2, for limits and regulations.)

(37) Vessels awaiting outside the entrance for a pilot will find good anchorage in 36 feet or more SE of the entrance to the channel, although permission to anchor in the restricted area must be obtained from the local naval authorities. The area in the lee of Point Loma, S of Ballast Point and W of the E line of the project channel, is reserved for pilot boats and harbor patrol or U.S. Government craft. (See **334.880**, chapter 2, for limits and regulations.) All of the numbered mooring buoys in the bay are for use by the U.S. Navy.

(38) **Dangers.**–There are numerous wrecks and obstructions in the shallow area of SE San Diego Bay. Caution should be exercised when navigating outside the marked channels.

(39) **Bridges.**–A fixed highway bridge linking San Diego and Coronado crosses San Diego Bay 0.3 mile S of the Tenth Avenue Marine Terminal. The bridge has a clearance of 195 feet for a width of 600 feet over the two middle channel openings, 175 feet for a width of 500 feet for the opening just W of the San Diego piers, and 156 feet for a width of 194 feet in the opening adjacent to Glorietta Bay. Racons and fog signals mark the bridge.

(40) **Tides.**–The mean range of tide is 4.0 feet at San Diego, and the diurnal range of tide is 5.7 feet. A range of about 8 feet may occur at the time of maximum tides. Daily predictions are given in the Tide Tables.

(41) **Currents.**–The currents set generally in the direction of the channels. In the vicinity of the entrance the usual velocity varies from 0.5 to 5 knots depending upon the stage of the tide. S of the end of the jetty there is a slight set toward Zuniga Shoal on the ebb. Great care should be taken while passing Ballast Point as a vessel may take a sudden sheer because of a crosscurrent deflected from Ballast Point.

(42) The eddy usually encountered along the ends of the municipal piers makes docking difficult. The velocity and direction of the eddy are irregular, and the greatest care must be exercised by even the most experienced. Strangers should not attempt to dock large vessels without a pilot. (See the Tidal Current Tables for daily predictions.)

(43) **Weather, San Diego.**–In the San Diego Bay area, visibilities are reduced to less than 0.5 mile(0.9 km), mostly by radiation fog, on about 3 to 7 days per month from September through April. December is the foggiest month. This fog is worst during the late night and early morning hours. Dense fog is as frequent at North Island as it is at Imperial Beach. However, fog signals indicate that in general it is foggier around the entrance to the bay than it is in the N sections. For example, in December, the fog signal at Point Loma is operating about 20 percent of the time, compared to 10 percent at Ballast Point.

(44) Temperatures are moderate. The average high is 71°F (21.7°C) and the average low, 57°F (14°C). August is the warmest month with an average temperature of 72.2°F (22.3°C). Absolute extremes range 82°F (27.8°C) from an all-time high of 111°F (43.8°C) recorded in September 1963 to an absolute minimum of 29°F (1.7°C) in January 1949. Every month has seen temperatures of 90°F (32°C) or greater except January and December. Only January has recorded below freezing (0°C) temperatures.

(45) Precipitation is light and falls, on average, only 71 days each year. January is the wettest month when an average of just over two inches (51 mm) can be expected. January through March is the rainiest period where an average of eight days each month records precipitation. July is the driest month and June through October comprise the dry season. On average, only two one-hundredths (0.5 mm) of an inch falls in July while August is the most rain-free month when an average of only two days during the month records measurable rainfall. Annual precipitation measures less than ten inches (<254 mm) each year. The wettest year on record, 1978, documented 19.48 inches (495 mm) of precipitation and the driest year, 1953, saw only 3.41 inches (87 mm) of rainfall. Only trace amounts of snowfall have occurred on several occasions during the months of December and January.

(46) Winds in the area are strongest from March through September, when they blow 17 knots or more about 2 percent of the time. Gales are unheard of. Wind gusts have reached 50 knots or more during January. Strong winds often have a southerly component, but they also blow from the W and E. Winds along the coast are often affected by local topography, particularly when the flow is off the land. For example, at Imperial Beach, E winds blow 15 to 20 percent of the time from November through March. At Lindbergh Field Municipal Airport, prevailing winds are out of the N through NE during this period. W through NW winds are also common at both places. They become increasingly more frequent by March. During the late spring and summer, SW through NW winds prevail at both locations. However, at the more exposed Imperial Beach, W winds occur up to 25 percent of the time, whereas the flow is more variable at San Diego. By October, the winter wind regime begins to reestablish itself.

(47) No vessel over 1,600 designed displacement tons should transit the Coronado Bay Bridge in low visibility conditions if the bridge is not held visually within stopping distance. Tank ships or barges carrying petroleum products, explosive or other hazardous materials should not commence a movement in the approaches to or within the outer or inner harbor of San Diego when visibility of less than 0.5 mile or 1,000 yards is prevalent.

(48) The National Weather Service maintains an office at Lindbergh Field Municipal Airport; barometers may be compared there or by telephone.

(49) (See page T-1 for **San Diego climatological table.**)

(50) **Pilotage, San Diego.**–All foreign vessels and vessels from a foreign port or bound thereto, and all vessels over 300 gross tons sailing under register between the port of San Diego and any other U.S. port, are subject to pilotage.

(51) Vessels sailing under enrollment and licensed, and engaged in the coasting trade, between the port of San Diego and other U.S. ports, are exempt from all pilotage, unless a pilot is actually employed.

(52) San Diego Bay is served by the San Diego Bay Pilots Association, Inc., which maintains an office at the Tenth Avenue Marine Terminal. The pilot boat monitors VHF-FM channel 16 1 hour prior to scheduled vessel arrivals, and uses VHF-FM channel 12 as a working frequency. The 65-foot pilot boat is white with the word PILOT on the deckhouse. The boat displays the International Code flag "H". At night, a flashing white light is shown when a vessel approaches. Arrangements for pilots are made by telephone (619-233-9734), or by calling "Pilot San Diego" by radio; the pilots request incoming vessels contact them at least 1 hour prior to arrival and provide estimated time of arrival and draft.

(53) Pilots board vessels in the vicinity of San Diego Bay Approach Lighted Whistle Buoy SD (32°37.3'N., 117°14.7'W.). When boarding, pilots request vessels maintain a speed not to exceed 5 knots and rig the pilot ladder about 3 feet above the water on the starboard side.

(54) The San Diego Unified Port District operates a VHF-FM radio station from Harbor Control Headquarters at Shelter Island for contacting merchant ships, port pilots, and other nearby stations. Channel 16 is for calling; channels 12 and 17 are for port operations. The station call sign is KJC-824.

(55) **Towage.**–Tugs to 2,250 hp are available from commercial operators in the San Diego area. Naval tugs handle navy vessels, but will assist commercial vessels in emergencies.

(56) San Diego is a **customs port of entry.**

(57) **Quarantine, customs, immigration, and agriculture quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.) U.S. Customs requires that all non–commercial vessels up to 90 feet in length returning from a foreign port or place, report directly to the Harbor Police dock (32°42'30"N., 117°14'05"W.) on Shelter Island. Only the Master may leave the vessel to contact the Harbor Police. Non–commercial vessels in excess of 90 feet in length must report directly to the B Street Pier (32°43'00"N., 117°10'36"W.) for inspection. Officials usually board documented vessels at their berths. Small commercial vessels and fishing boats are boarded at the Broadway Pier, just S of the B Street Pier.

(58) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(59) **Coast Guard.**–San Diego Coast Guard Station, Air Station, and a Marine Safety Office (see appendix for address) are on the mainland just NE of the E end of Harbor Island.

(60) **Harbor regulations.**–The Port of San Diego is under control of the San Diego Unified Port District. Rules and regulations are enforced by a Port Director, who is appointed by the Board of Port Commissioners. The general offices of the port district are at 3165 Pacific Highway, San Diego. The manager of marine operations and the chief wharfinger have offices at the Tenth Avenue Marine Terminal, 687 Switzer Street, San Diego. The office of wharfinger can be reached by telephone at (619) 686-6346 or fax (619) 234-3965).

(61) The Coast Guard Captain of the Port, San Diego, has designated the ship channels in San Diego Harbor as "narrow chan-

nels" for the purposes of enforcing Rule 9 of the Navigation Rules. Vessels of less than 20 meters (65.6 feet), sailing vessels, vessels engaged in fishing, and crossing vessels shall not impede the passage of a vessel that can safely navigate only within a narrow channel.

(62) A **security zone** is along the E side piers in South San Diego Bay, starting with **Chollas Creek** and extending S to Pier 14. (See **165.1 through 165.8, 165.30, 165.33, and 165.1101**, chapter 2, for limits and regulations.)

(63) **Wharves.**–The **San Diego Unified Port District** owns the deepwater commercial facilities in the bay and operates them either independently or in conjunction with private firms. The port piers and wharves have water, rail, and highway connections. There are a number of smaller privately operated wharves and piers used for receiving oil, repairing vessels, and for mooring and fueling small craft. Only the deep-draft commercial facilities are described. The alongside depths given for each facility described are reported depths. (For information on latest depths, contact the Port of San Diego.) For a complete description of the port facilities, refer to Port Series No. 27, published and sold by the U.S. Army Corps of Engineers. (See appendix for address.)

(64) General cargo at the port is usually handled by ship's tackle; special handling equipment, if available, is mentioned in the description of the particular facility. Mobile cranes up to 165 tons and floating cranes up to 75 tons are available.

(65) In the port area, the San Diego Unified Port District and private companies operate warehouses having a total of more than 848,000 square feet of dry storage space and more than 1,680,000 cubic feet of cold storage space. A large amount of transit shed space and open storage is available.

(66) San Diego Unified Port District, B Street Pier, Cruise Ship Terminal: (32°43'02"N., 117°10'28"W.): 400-foot face, 30-35 feet alongside; 1,000-foot N and S sides, 35 to 37 feet alongside; deck height, 13 feet; berthing cruise vessels.

(67) San Diego Unified Port District, Broadway Pier, S of B Street Pier: 130-foot face, 35 feet alongside; 1,000-foot N and S sides, 35 feet alongside; deck height 13 feet; berthing cruise vessels and other miscellaneous craft.

(68) Navy Pier, S of Broadway Pier: owned and operated by the Naval Supply Center.

(69) G Street Mole Pier, S of Navy Pier: berthing of tuna seiners and commercial fishing vessels.

(70) San Diego Unified Port District, Tenth Avenue Marine Terminal, Berths 1 and 2: concrete bulkhead, 1,120 feet of berthing space; 30 to 32 feet alongside; deck height, 13 feet; pipelines extend from four steel storage tanks at the rear, total capacity 167,850 barrels; receipt and shipment of containerized and conventional cargo and perishable food commodities; bunkering vessels.

(71) San Diego Unified Port District, Tenth Avenue Marine Terminal, Berths 3-6: concrete bulkhead, 2,580 feet of berthing space; 35 to 36 feet alongside; deck height, 13 feet; approximately 3.5 acres of concrete-surfaced open storage area are located at rear; one six inch pipeline extends from three steel storage tanks, total capacity 3,000,000 gallons, formerly used for molasses, palm oil, and vegetable oil; cement unloader with maximum unloading capacity of 800 tons per hour; warehouse storage for 48,000 metric tons of cement.

(72) San Diego Unified Port District, Tenth Avenue Marine Terminal, Berths 7 and 8: 920 feet of berthing space, 20 to 42 feet alongside; deck height, 13 feet; one 14-inch pipeline extends from wharf to storage tanks; bulk loader with a maximum loading capacity of 2,000 tons per hour; 12 concrete silos and two steel tanks located in rear with a total capacity of 33,000 metric tons; receipt and shipment of miscellaneous dry bulk commodities, conventional and containerized general cargo; bunkering vessels.

(73) Crosby Street Berthing Pier, S of Tenth Avenue Marine Terminal: concrete pier with wood fender pilings; 575 feet in length; depths ranging from 43 feet at W end to 10 feet at E end; berthing for tuna seiners, commercial fishing vessels, and miscellaneous vessels.

(74) San Diego Unified Port District, National City Marine Terminal, Berths 24-1 and 24-2: concrete bulkhead; 1,400 feet long, 20 to 35 feet alongside; deck height, 13 feet; one 10-inch pipeline extends from wharf to three steel oil storage tanks, total capacity 348,000 barrels; about 188 acres of paved open storage; receipt and shipment of general cargo and automobiles in foreign and domestic trade; occasional receipt of fuel oil.

(75) San Diego Unified Port District, National City Marine Terminal, Berths 24-3 and 24-4: concrete bulkhead; 1,000 feet of berthing space 35 to 37 feet alongside; deck height, 13 feet; one 18-inch pipeline extends from wharf to fuel oil storage tanks; receipt and shipment of general cargo and automobiles in foreign and domestic trade; occasional receipt of fuel oil.

(76) San Diego Unified Port District, National City Marine Terminal, Berths 24-10 and 24-11: concrete bulkhead; 1,500 feet of berthing space 35 feet alongside; deck height, 13 feet; 36 acres of open lumber storage; additional 40 acres open storage; available as required at rear of National City Marine Terminal; receipt and shipment of conventional general cargo and automobiles in foreign and domestic trade; receipt of lumber; shipment of cattle.

(77) **Supplies.**–Marine supplies of all kinds are available in San Diego. Bunker fuel, diesel oil, and lubricants are available. Large vessels can be bunkered via pipeline at the Tenth Avenue Marine Terminal, or arrangements can be made to fuel at all commercial berths from barges. Water is available at most of the berths.

(78) **Repairs.**–There are shipbuilding and repair yards in San Diego with floating drydocks, the largest of which has a lifting capacity of 25,000 tons. The largest marine railway can handle craft up to 1,400 tons. Complete shipyard facilities are available for all types of repair work.

(79) A U.S. Navy graving dock, located at the naval station near the foot of 32nd Street, may be used by local repair firms by prior arrangements with the San Diego Unified Port District and local naval authorities. The dock has a clear inside length of 693 feet and an entrance width of 90 feet. The dock is served by a 27½-ton full portal traveling crane. The graving dock at National Steel and Shipbuilding Co., about 0.9 mile NW of the Navy graving dock, has a clear length of 998 feet and an entrance width of 176 feet.

(80) **Communications.**–San Diego has transcontinental railroad connections to the N and E. Major airline service is available at San Diego International Airport, Lindbergh Field. San Diego is the port of call for many steamship and cruise lines. Major bus, railroad, and motor freight lines serve the city.

(81) **Small-craft facilities.–Shelter Island,** across the channel from North Island and 1.5 miles above Ballast Point, includes the **Shelter Island Yacht Basin** on the S and the **Americas Cup Harbor** on the N. Shelter Island is the most important small-boat area in San Diego Bay. The yacht basin has several large marinas

and yacht clubs. It can accommodate more than 2,000 boats at its piers, floats, and moorings. The entrance channel has depths of 20 feet to inside the entrance, thence 15 feet to most of the facilities; the least depth is 9 feet. The entrance is marked by lights. The **354°** lighted range marking the entrance to San Diego Bay also marks the approach to the entrance to Shelter Island Yacht Basin. The **harbor police** are at the Harbor Control Headquarters just inside the entrance to the yacht basin. The police dock is also the boarding station for the inspection of small craft by Customs, Public Health, Immigration and Agricultural quarantine personnel when such inspections are necessary. Harbor police boats, providing fire protection, law enforcement, and assistance to small boats in distress, operate from this facility on a 24-hour basis. Overnight berths for transient vessels are usually available at one of the marinas; if no such berth is available, temporary mooring or berthing may be made available through the harbor police. The Americas Cup Harbor has accommodations for over 600 vessels and is the home port for many commercial fishing vessels. Repair yards in the basin have marine railways that can handle craft up to 800 tons. All kinds of repairs to small vessels may be obtained here. Both the yacht basin and the Americas Cup Harbor have fueling docks, a launching ramp, and marine supplies.

(82) In September 1988, several uncharted dangerous wrecks were reported about 0.4 mile SW of the entrance to the basin.

(83) **Harbor Island,** about 0.5 mile NE of Shelter Island, is in the northernmost part of the bay. **Harbor Island West Basin** has berthing and mooring accommodations for nearly 1,600 craft. A number of marinas, hotels, restaurants, and shops are along the shore of the basin. A light shows from atop a building near the W end of the island.

(84) A **090°–270° measured nautical mile** is off the S side of Harbor Island. Each range is marked by two diamond-shaped markers.

(85) **Glorietta Bay,** on the S side of Coronado and 6 miles from Ballast Point, is a small-craft harbor occupied by a yacht club and a small marina. The facilities include berths for over 215 yachts and small craft. A channel marked by lighted and unlighted buoys and a **232°** lighted range leads from the main channel in San Diego Bay to the basin in Glorietta Bay. In February 1981, the reported centerline controlling depth in the channel was 13 feet, thence depths of 8 to 10 feet were reported in the basin except for lesser depths along the edges. A 5 mph **speed limit** is enforced in Glorietta Bay. Water, ice, and a launching ramp are available.

(86) A **restricted area**, marked by buoys, is outside the SE limit of the channel into Glorietta Bay. (See **334.860**, chapter 2, for limits and regulations.)

(87) A **security zone** is also outside the SE limit of the channel into Glorietta Bay, within the restricted area off the Naval Amphibious Base. (See **165.1 through 165.8, 165.30, 165.33, and 165.1120**, chapter 2, for limits and regulations.)

(88) **Speed Control Lights** cross South San Diego Bay, near the head, N of Chula Vista.

(89) **Chula Vista Harbor** is on the E side near the head of South San Diego Bay at Chula Vista. The entrance is protected by breakwaters marked at the outer ends by private lights. The entrance channel and basin channel are marked by private buoys, lights, and daybeacons. In 1994, the approach to the basin had reported depths of 18 feet with 15 to 18 feet reported alongside the piers. Berthing, electricity, water, ice, sewage pump-out, nautical supplies, and a launching ramp are available.

(90) **Chart 18740.**–The 80-mile coast between San Diego Bay and San Pedro Bay is thickly settled, and the buildings of numerous towns and resorts are prominent from offshore. Several small-boat harbors and the port of Newport Bay are along the coast.

(91) The first 11 miles of the coast, between Point Loma and Point La Jolla, is extremely rocky, and the kelp beds extend up to 2 miles from shore; vessels should stay well offshore.

(92) About 1 mile N of Point Loma Light is a submerged sewer outfall line extending about 1 mile to the W.

(93) **Ocean Beach,** 5 miles N of Point Loma, has a large Y-shaped fishing pier with a private fog signal on the end.

(94) **Weather, Gulf of Santa Catalina**.–Over the Gulf of Santa Catalina and along its shores, fog is a problem during fall and winter. This is most often a land (radiation) fog that drifts out over the gulf at night. By late morning, conditions begin to clear, particularly along the coast. Offshore, fog reduces visibilities to less than 0.5 mile (0.9 km) on about 4 to 9 days per month, from September through February and in May. September and October are the worst months. Along the coast, visibilities drop below 0.5 mile (0.9 km) on about 2 to 8 days per month from August through April. November, December, and February are the worst months.

(95) Gale force winds never occur as much as 1 percent of the time in the Gulf of Santa Catalina. They are infrequently encountered from November through April. Wind speeds of 17 knots or more occur about 1 to 3 percent of the time from December through May. Winds on the coast are often light. At Camp Pendleton, winds less than 3 knots occur 40 to 50 percent of the time from September through March. Seas are most likely to get choppy from November through April, when distant storms S of 40°N. generate W swells. These swells are 6 feet (1.8 m) or more, about 2 to 5 percent of the time. In winter, they occasionally exceed 9 feet (2.7 m) and some 12-foot (3.7 m) swells have been reported.

(96) **Chart 18765.**–**Mission Bay,** entered between two jetties 5.5 miles N of Point Loma, is a recreational small-craft harbor administered by the city of San Diego. The outer end of the S jetty is marked by a light. A prominent feature when approaching the harbor is the municipal fishing pier at Ocean Beach, 0.3 mile S of the entrance. The lighted 338-foot tower at Sea World is prominent 1.8 miles E of the entrance. Fog signals are sounded from the fishing pier. A dredged channel leads from deep water in the Pacific Ocean to the highway bridge about 1.3 miles above the entrance. In February 1986, dangerous submerged rocks were reported in the entrance to Mission Bay in about 32°45'31"N., 117°15'29"W. **Quivira Basin** and **Mariners Basin,** on the E and W sides of the channel, respectively, are entered about 1 mile above the entrance. In June 2001, the controlling depths in the dredged entrance channel were 8.5 feet (15.4 feet at midchannel) to the highway bridge about 1.3 miles above the entrance, except for lesser depths along the channel edges just below the bridge; a controlling depth of 13.5 feet was in Mariners Basin, except for lesser depths along the edges, and 19.6 feet was in Quivira Basin except for lesser depths along the W edge. A rock groin extends about 150 yards NW from the S side of the entrance to Quivira Basin. The inner bay has depths of about 6 feet.

(97) **COLREGS Demarcation Lines.**–The lines established for Mission Bay are described in **80.1106**, chapter 2.

(98) Two fixed highway bridges cross Mission Bay. The first, crossing above the entrance between Ventura Point and Sunset Point, has a clearance of 38 feet. The second, connecting Vacation Isle with Crown Point to the N and Dana Landing to the S, has a clearance of 31 feet under the N span and 38 feet under the S span.

(99) An aerial tramway cable, with a clearance of 42 feet, crosses the entrance to **Perez Cove,** immediately SE of Dana Landing.

(100) The San Diego City Lifeguard Headquarters and the San Diego Police Department, Mission Bay Harbor Unit, are on the S side of the entrance to **Quivira Basin.** Harbor regulations are enforced and emergency assistance is provided by the two units. The Lifeguard Service maintains a 24-hour watch on VHF-FM Channel 16 and handles all dispatches. Police matters are dispatched to the Police Harbor Patrol. Calls for assistance in Mission Bay and within 3 miles of the coastline, from Point Loma to the S, to Blacks Beach, about 3 miles N of Point La Jolla to the N, are the responsibility of the Lifeguard Service. Both units have patrol boats and make safety inspections. Water skiing, swimming, sailing, fishing and speed regulations are enforced in Mission Bay. Most regulations are posted; complete regulations are available from the City Lifeguard Headquarters Office. A full service repair facility is available in Quivira Basin. A 100-ton hoist for hull and engine repairs, gasoline, diesel fuel, water, ice, and marine supplies are available. There are numerous launching ramps and parking areas around the bay. The inner bay has several marinas and many private moorings.

(101) It is reported that moderate to heavy swells from the W outside the entrance tend to break just inside the entrance along the S jetty. Under these conditions, the entrance is dangerous and should be made by staying in the left quarter of the channel (near the N jetty). With a rough sea outside, a heavy surge exists inside the bay, especially in Quivira Basin. Boats must be securely moored to prevent damage from this surge condition. A timber pile breakwater extends N from the S point of the entrance to Quivira Basin. The breakwater restricts over half of the entrance to the basin.

(102) In May 1983, it was reported that rocks, some possibly awash, are in the S part of the entrance to Quivira Basin.

(103) **Special anchorages** are along the W side of Mission Bay in **San Juan Cove, Santa Barbara Cove, Bonita Cove,** Mariners Basin, and Quivira Basin. (See **110.1 and 110.91,** chapter 2, for limits and regulations.)

(104) **Mission Beach,** 6.5 miles N of Point Loma, is an amusement place with prominent buildings. From seaward the highest part of the roller coaster looks like a dome.

(105) **Pacific Beach,** 8 miles N of Point Loma, has a pleasure pier extending about 260 yards from the beach. The pier was partially destroyed in the winter of 1984, and submerged piles are reported within 90 yards of the seaward end; caution is advised.

(106) A 2-mile rounding rocky point, 9 miles N of Point Loma, is the first high land N of San Diego Bay. The point is a spur from 822-foot **Soledad Mountain.** The S end of this headland is called **False Point,** and the N end is **Point La Jolla.** In the vicinity of Point La Jolla, rock cliffs with caves rise abruptly from the water to heights of 80 feet. The buildings at **La Jolla** and Pacific Beach, and the television towers on Soledad Mountain are prominent.

(107) **Scripps Institution of Oceanography,** one of the leading institutions in research in oceanography and marine biology, has extensive facilities 12 miles N of Point Loma. The institution maintains a long pier for observation purposes.

(108) Just N of Scripps Institution the bluffs rise to a height of 300 feet, then decrease gradually for the next 5 miles to heights of 20 to 80 feet.

(109) A **000°–180° measured nautical mile** has been established 13.5 miles N of Point Loma; each range is marked by two steel towers.

(110) **Del Mar,** 18 miles N of Point Loma, is a resort city.

(111) The coast from Del Mar N for 31 miles to San Mateo Point is a low, flat tableland with abrupt cliffs 60 to 130 feet high and with broad beaches. The tableland is intersected by numerous deep valleys with streams that usually dry in the summer. In the N part, the high ridges of the interior are much nearer the coast. Paralleling this coast are U.S. Highway 101 and the Atchison, Topeka and Santa Fe Railway.

(112) **Charts 18740, 18774, 18758.–Carlsbad,** 30 miles N of Point Loma, is a resort area with a number of hotels and motels. The stack of the San Diego Gas and Electric Co. near the S end of town is very prominent. The stack is marked by flashing white lights during the day and by fixed red lights at night. The company maintains a lighted bell buoy about 0.9 mile offshore. Mariners are cautioned to pass W of the lighted bell buoy because it marks the seaward end of a submerged pipeline. Near the N edge of town the low white square tower on the W end of the San Diego Army and Navy Academy is distinctive.

(113) The pleasure pier at **Oceanside,** 32.5 miles N of Point Loma, has a fish haven covered 10 feet around its seaward end. The pier is marked by lights.

(114) **Oceanside Harbor,** at the N end of the city, 1.2 miles NW of the pleasure pier, is a small-craft harbor administered by the City of Oceanside, Department of Harbor and Beaches. The harbor, which can accommodate about 950 small craft, shares a common entrance with Del Mar Boat Basin (**Camp Pendleton Marine Corps Base**) to the N.

(115) Prominent features when approaching the harbor include a large lighted sign reading "OCEANSIDE" in white letters on a blue background located on a grassy bluff overlooking the middle of the harbor, a tall condominium on the E side of the harbor, a lighted tower on the SE side of the harbor resembling a lighthouse, and a hotel in the vicinity of the harbor entrance.

(116) The common entrance to Oceanside Harbor and Del Mar Boat Basin is between two jetties. The long W jetty is marked by a single light at the seaward end, and the short E jetty has a N and S extension. The S extension has a light and fog signal at the seaward end; a light is at the outer end of the N extension. Inside the common entrance is a junction buoy separating the Oceanside Harbor entrance channel and the Del Mar Boat Basin entrance channel. About 300 yards NE of the junction buoy is a submerged jetty marked by a buoy with the words "**DANGER SUBMERGED JETTY**." The buoy gives warning to mariners of a submerged jetty close N of the Oceanside Harbor entrance channel. The inshore end of the Oceanside Harbor entrance channel is marked by buoys and a light on the N side, and by a daybeacon and a light on the S side.

(117) **COLREGS Demarcation Lines.**–The lines established for Oceanside Harbor are described in **80.1108,** chapter 2.

(118) **Channels.**–A dredged channel leads from deep water through the entrance jetties, thence branches E to Oceanside Harbor and N to Del Mar Boat Basin. Strangers should not attempt the entrance at night in rough seas without assistance. The entrance channel is subject to severe wave action and shoaling, and buoys are frequently shifted with changing conditions. Mariners are requested to contact the harbor patrol on VHF-FM channel 16 before entering.

(119) **Harbor regulations.**–The harbor is under the control of the City of Oceanside, Department of Harbor and Beaches. The harbor headquarters building is on the E side of the harbor opposite the entrance. About 50 berths for transient craft are available at the harbor headquarters. All moorage must be arranged with the harbor office in the headquarters building. Prepaid reservations are accepted for 24 guest slips, with the remainder available on a first come, first served basis. The **Oceanside Harbor Police** operates from the headquarters building. The police boats are equipped with rescue and fire fighting equipment. The police boats monitor VHF-FM channel 16, 24 hours a day, and work on channel 12.

(120) **Weather, Oceanside.**–Wind speeds at Oceanside rarely get above 28 knots; they are most likely to occur from December through April. Fog is sometimes a late night and early morning navigational hazard from August through March. During this period, visibilities drop below 0.5 mile (0.9 km) on 2 to 8 days per month; November is usually the foggiest month. The worst time of day is between midnight and 0500.

(121) Swells are most frequent from January through April.

(122) **Supplies.**–Gasoline and diesel fuel are pumped at the fuel dock. Marine supplies, ice, and pumpout facilities are available.

(123) **Repairs.**–A repair yard just N of the harbor district headquarters has a mobile lift that can handle craft to 42 feet and 14 tons. Hull, engine, and electronic repairs are available.

(124) **Del Mar Boat Basin (Camp Pendleton),** just N of Oceanside Harbor, is part of the U.S. Marine Corps reservation. (See **334.910**, chapter 2, for limits and regulations of the **restricted area.**) The boat basin shares a common entrance with Oceanside Harbor. The channel is marked by buoys and daybeacons. A **restricted area** is off the outer breakwater. (See **334.900**, chapter 2, for limits and regulations.)

(125) A **military exercise area** extends about 3 miles seaward from about 2 miles NW of the boat basin northwestward to San Clemente. Mariners are advised to consult Eleventh Coast Guard District Local Notice to Mariners for scheduled exercise dates and times.

(126) A **restricted area** is within the military exercise area and centered about 4.5 miles NW of Del Mar Boat Basin entrance. (See **334.905,** chapter 2, for limits and regulations.)

(127) A red and white checkered elevated tank, 1.7 miles NE of the boat basin, is prominent from well offshore. The highway bridge and the trestlework of the railroad crossing of the **Santa Margarita River,** 1.7 miles W of the tank, also are prominent. A large white building nearly 7 miles NW of the boat basin is conspicuous from seaward.

(128) **San Onofre Mountain,** 44 miles N of Point Loma and 1.5 miles inland, is the highest of the coastal range in the area.

(129) **San Mateo Point,** locally known as **Cottons Point** and 47 miles NW of Point Loma, ends in cliffs 60 feet high and is the N head at the mouth of **San Mateo Creek.** Both San Mateo Creek and **Arroyo San Onofre,** a mile SE, are crossed by a trestle. Two large domes of a nuclear powerplant are 2.3 miles SE of San Mateo Point. A smaller dome-shaped building is on top of the bluff a few hundred yards SE.

(130) **San Mateo Point Light** (33°23.3'N., 117°35.8'W.), 63 feet above the water, is shown from a pole on San Mateo Point.

(131) **Charts 18740, 18774, 18746.**–From San Mateo Point to Dana Point, 7.5 miles NW, the land is higher and more rugged, and is broken by **San Juan Creek** about 1.5 miles E of Dana Point. The railroad and the highway run close together along the beach under the bluffs in this stretch of the coast to San Juan Creek, where the railroad turns inland.

(132) **San Clemente,** 2 miles N of San Mateo Point, has many white houses with red-tiled roofs, making the place conspicuous from the sea. There is a small pleasure pier at the town; a fish haven covered 10 feet is off its seaward side. A reef that uncovers 3 feet is about 700 yards NW of the pier.

(133) **Dana Point,** 8 miles NW of San Mateo Point, is the seaward end of a high ridge. The spur forming the point ends in a moderately bold sandstone cliff 220 feet high with a precipitous broken face. Outlying rocks and ledges marked by a lighted whistle buoy extend offshore for 350 yards. **San Juan Rock,** 10 feet high and about 50 feet in extent, is 340 yards S of the highest point on the cliff, and a rock covered 2 fathoms is 2.4 miles SE of the point.

(134) **Charts 18740, 18746.–Dana Point Harbor** is a small-craft harbor in the lee of Dana Point. The harbor, administered by the Orange County Harbor, Beaches, and Parks District, is entered from the E between two breakwaters each marked by a light on the seaward end. A fog signal is at the S light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. A church with a giant cross is very visible on the hill above the harbor. A submerged sewer outfall line extends about 0.6 mile from shore, passing about 300 yards E of the S breakwater light. A rock, covered 7½ feet and marked by a lighted buoy, is about 300 yards NE of the S breakwater light. When entering the harbor care should be taken to remain clear of these dangers, especially during low stages of the tide and/or periods of heavy SE swell.

(135) Numerous uncharted private racing buoys are off the entrance to the harbor.

(136) In September 2001, the controlling depths were 14.4 feet (15 feet at midchannel) in the entrance, thence 8.2 feet at midchannel in the channel that leads WNW to the W basin, except for shoaling to 0.6 feet in the left outside quarter of the channel opposite Daybeacon 14; the entrance channel to the E basin had a depth of 10.2 feet. The harbor is well protected from all sides.

(137) The harbor's E and W basins are separated by a fixed highway bridge with a 45-foot channel span and a clearance of 20 feet. Berths in the E basin can accommodate over 1,400 vessels, and berths in the W basin can accommodate over 1,000 vessels. A **harbormaster** assigns berths in the harbor.

(138) The Dana Point Harbor Patrol has an office in the most southeasterly building observed after passing through the breakwater. Patrol craft equipped with rescue and fire fighting equipment are stationed here. The patrol maintains a 24-hour radio watch on 2182 kHz and VHF-FM channel 16. Berthing assignments for about 42 transient craft are available at the harbor patrol office.

(139) A **speed limit** of 5 mph is enforced in Dana Point Harbor. A swimming area, marked by private buoys, is in the NW corner of the harbor.

(140) A **special anchorage** is in the W part of the harbor. (See **110.1 and 110.93,** chapter 2, for limits and regulations.)

(141) **COLREGS Demarcation Lines.**–The lines established for Dana Point Harbor are described in **80.1110,** chapter 2.

(142) **Supplies** and **repairs.**–Most supplies and repairs are available at the marinas and service facilities at the harbor. Lifts to 25 tons are available.

(143) **San Juan Capistrano,** a small town about 4 miles inland from Dana Point, is the site of the old mission founded in 1776. The grounds and the buildings have undergone extensive preservation, and services are held regularly in the chapel used by founding Father Junipero Serra. This mission is famous for the return of the swallows each March 19.

(144) The 11.5-mile coast from Dana Point to Newport Bay is bold with rocky cliffs 40 to 100 feet high; these are the seaward ends of ridges separated by narrow, deep valleys. The community of **Laguna Beach** is midway along this stretch. A fishing and pleasure pier is near the mouth of **Aliso Creek** about 3.5 miles NW of Dana Point.

(145) Four private lighted buoys, about 4.1 miles SW of Laguna Beach, mark an area used to moor equipment and netting. Mariners should not attempt to pass between these buoys.

(146) **Santiago Peak,** 17.5 miles NE of Dana Point and visible 80 miles, is the dominant feature of this part of the coast; the peak is double-headed and dark in contrast with the immediate coastal range.

(147) **Chart 18754.–Newport Bay,** 64 miles NW of Point Loma, is an extensive lagoon bordered on the seaward side by a 3-mile sandspit. The bay is an important yachting and sport fishing center, and offers excellent anchorage for large yachts and small craft under all weather conditions. The city of **Newport Beach** embraces the districts of **Newport** and **Balboa,** on the sandspit, and **Corona Del Mar,** E of the entrance.

(148) **Prominent features.**–The numerous houses and buildings along the beach and on the hills back of the bay are prominent from seaward. The tall office buildings at the Newport Center, 1.4 miles N of the harbor entrance, are the most conspicuous. The memorial hospital building, 0.3 mile N of the turning basin, and the light-colored concrete school buildings and tall tower on the high ground 1 mile back from the beach are also conspicuous.

(149) The entrance to Newport Bay is between jetties 275 yards apart with lights at their outer ends. A fog signal is at the W jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. A lighted bell buoy is off the entrance.

(150) A **111°37'–291°37' measured nautical mile** is in San Pedro Channel, about 1.3 miles W of the entrance to Newport Bay. The E range is marked in front by a daymark on an 800-foot pleasure pier and in the rear by a daymark on shore at Balboa Beach. The W range is marked by daymarks on shore at Newport Beach. Another 950-foot pleasure pier is 2.8 miles NW of the W jetty.

(151) **COLREGS Demarcation Lines.**–The lines established for Newport Bay are described in **80.1112,** chapter 2.

(152) **Channels.**–A Federal project provides for a 20-foot main channel from the entrance to a turning basin of the same depth NW of Lido Isle and a 10-foot Balboa Island North Channel extending N from the entrance along the E and N sides of Balboa Island. (See Notice to Mariners and latest editions of charts for controlling depths.)

(153) **Anchorages.**–Special anchorages are in Newport Bay. (See **110.1, 110.95, and 110.212,** chapter 2, for limits and regulations.) Assignments are made by the harbormaster.

(154) **Dangers.**–A **speed limit** of 5 m.p.h. in Newport Bay has been established by the Orange County Harbors, Beaches, and Park District. The upper reaches of the bay are extremely shoal and have been closed by the Health Department because of contamination.

(155) In January 1986, a sunken wreck was reported in the channel about 300 yards S of the U.S. Coast Guard pier in about 33°36'N., 117°53'W.

(156) **Bridges.**–There are no bridges over the main channel. None of the bridges to the islands in the bay restrict passage to the anchorage areas.

(157) **Tides.**–The mean range of tide is 3.7 feet at Newport Bay entrance, and the diurnal range of tide is 5.4 feet.

(158) **Weather, Newport Bay**.–Severe storms are rare. The Santa Ana is an exceptional wind that blows from the NE or E with great violence, although of short duration. (See Weather, Los Angeles, indexed as such, this chapter for discussion of Santa Ana winds.)

(159) **Harbor regulations.**–The Orange County Harbors, Beaches, and Parks District controls the movement and berthing of vessels under the direction of a harbormaster, who has an office on the E side of the bay about 0.8 miles from the entrance. Patrol and assistance craft operate from the harbor office on a 24-hour basis. The harbor office may be contacted by telephone (714) 723-1002 or VHF-FM channels 12 and 16. The patrol boats monitor VHF-FM channel 16.

(160) **Coast Guard**.–A search and rescue craft of the U.S. Coast Guard is stationed at the pier adjacent to the Harbor District Headquarters.

(161) **Wharves.**–The numerous small wharves and landings in the bay are mostly for the use of local yachts and fishing craft. Five berths and several offshore moorings are available for transient craft at the Harbor District Headquarters pier. The harbormaster must be consulted before mooring. Five other transient berths are usually available at a marina at the NW end of the turning basin.

(162) **Supplies.**–Fuel, water, and marine supplies are available at most of the facilities in the bay.

(163) **Repairs.**–The largest marine railway in Newport Bay has a capacity of 325 tons and can handle craft up to 150 feet. Machine shops are available. Several shipyards can haul out small boats for general repairs.

(164) **Communications.**–The city is served by State Route 1.

(165) **Chart 18746.**–The 20-mile coast from Newport Bay to Point Fermin is low, and there are several lagoons near the beach. There are no trees near the shore; towns and resorts are almost continuous along the beach.

(166) **Huntington Beach State Park** is a recreational area that extends 2 miles NW along the coast from the mouth of **Santa Ana River,** which is 4.5 miles NW of Newport Bay entrance. The trestle crossing the mouth of this river is conspicuous. A buoy marks the seaward end of a terminal structure of a water conduit extending from shore 1.4 miles NW of Santa Ana River. The twin stacks of the Southern California Edison Co. plant on shore and a spire about 1 mile back from the beach are conspicuous from any direction.

(167) A submerged oil pipeline extends nearly 1.2 miles seaward, 2 miles NW of Santa Ana River; mooring buoys are off the end of the pipeline. A private lighted bell buoy marks the seaward limit. **Huntington Beach,** a resort 5 miles NW of Newport Beach, is identified by its many oil derricks. The city has a fishing and pleasure pier which has a fish haven covered 10 feet around its seaward end. **Sunset Beach** is a small town 5 miles NW of Huntington Beach. An elevated tank is near the W extremity of the town.

(168) **Charts 18746, 18749.–Anaheim Bay,** 14 miles NW of Newport Bay, is the site of the U.S. Naval Weapons Station. Jetties protect the entrance to the bay. Waters inside the jetties are within a **restricted area**, and **explosive anchorages** have been established on the E and W sides of the channel. (See **334.930 and 110.215**, chapter 2, for limits and regulations.) In January-March 2000, the controlling depths were 37 feet in the entrance channel to the turning basin, thence 35 feet in the basin. The channel is marked by lighted and unlighted buoys, lights, and a **036°48'** lighted range. The outer ends of the jetties are marked by lights. A fog signal is at the W jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(169) In Anaheim Bay, during a flooding tide, the current 50 to 75 yards from the Naval Weapons Station's pier flows E to W as opposed to the normal flow of W to E. This causes a ship approaching the berth for a portside mooring to experience difficulty in twisting to starboard. An ebbing tide has an opposite effect. After a heavy rain, runoff water from the area N of Anaheim Bay during an ebbing tide increases the rate of ebb up to 5 knots with resultant swirls and countercurrents.

(170) **COLREGS Demarcation Lines.**–The lines established for Anaheim Bay are described in **80.1114,** chapter 2.

(171) **Huntington Harbour,** a small-boat basin, is just S of Anaheim Bay. The harbor is a private development, and, with the exception of two small marinas, consists of private docks adjacent to waterfront homes.

(172) The harbor is entered through the restricted waters of Anaheim Bay, and permission to pass must be obtained from the Commanding Officer, U.S. Naval Weapons Station, Seal Beach, Calif. (See **334.930**, chapter 2, for regulations governing passage.)

(173) The **Harbor Patrol** office is adjacent to the boat launch ramp in the NW corner of the harbor. A repair yard can handle craft to 50 feet and 25 tons for engine and hull repairs. Gasoline, diesel fuel, and marine supplies are available in the harbor. Launching ramps are in the NW and SE corners of the harbor.

(174) **Seal Beach,** just NW of Anaheim Bay, has several resort structures and a 1,650-foot pleasure pier, which has a fish haven covered 9 feet at its seaward end.

(175) **Alamitos Bay,** 15 miles NW of Newport Bay, is the site of the **Long Beach Marina,** a small-craft harbor administered by the city of Long Beach Marine Department. The harbor is entered from the S between two jetties each marked by a light on the seaward end. A fog signal is at the W jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(176) A dangerous wreck is about 0.5 mile SSW of the entrance to Alamitos Bay. In 1983, a sunken wreck was reported about 0.2 mile W of the entrance in about 33°44.2'N., 118°07.5'W.

(177) In September 1973, depths of about 17 feet were reported in the entrance channel to the fueling station about 0.9 mile N of the jetty lights, with about 10 feet in the channel from the fueling station to the slips in the NE part of the bay.

(178) A **nonanchorage area** has been designated at the mouth of the entrance channel to Alamitos Bay. (See **110.214 (a) (16) and (b),** chapter 2, for limits and regulations.)

(179) The fixed bridge across Marine Stadium, which forms the inner part of the bay, has a fixed span with a clearance of 32 feet. A fixed bridge with a clearance of 11 feet crosses the junction of the W waterway and Marine Stadium. A fixed bridge, with a clearance of 11 feet, crosses the E waterway off Marine Stadium that leads to a NE basin. A fixed bridge, with a clearance of 4 feet, crosses the W waterway between Naples and Belmont Shore. The five fixed bridges crossing the Rivo Alto Canal on Naples Island have a least clearance of 7 feet, and the power cable has a reported clearance of 55 feet.

(180) Berths in Long Beach marina are limited to about 1,800 boats, but extensive parking and ramp-launching areas are provided for trailer-drawn craft. Visiting yachts may obtain temporary berthing on a first-come first-served basis. All mooring is controlled by a **harbormaster,** who has an office on the E side of the entrance channel near the end of the point about 500 yards above the bend in the channel.

(181) **Supplies** and **repairs.**–All types of supplies and services are available at the marinas and service facilities in the bay. The largest repair yard can handle craft up to 40 tons and 60 feet.

(182) A pleasure pier on the W side of Belmont Shore, 1.7 miles NW of Alamitos Bay entrance, extends about 340 yards from the beach. A fog signal is on the end of the pier, and a fish haven is 100 feet off the seaward end. A reported wreck covered 16 feet is about 940 yards S of the end of Belmont Pier.

(183) **Charts 18751, 18749.–San Pedro Bay,** between Seal Beach on the E and Point Fermin on the W, is 82 miles NW of San Diego. On the shores of the bay are the city of **Long Beach** and the port areas of the city of **Los Angeles. Terminal Island,** in the NW part of San Pedro Bay, separates the outer bay from Los Angeles and Long Beach inner harbors. The bay is protected by breakwaters and is a safe harbor in any weather.

(184) **Traffic Separation Scheme, Los Angeles/Long Beach,** also known as **Traffic Separation Scheme, Gulf of Santa Catalina,** is in the approaches to Los Angeles/Long Beach. The Scheme leads from the Gulf of Santa Catalina through San Pedro Channel and Santa Barbara Channel to Point Arguello. (See charts 18022, 18740, 18720, 18725, 18746, 18721.) This Traffic Separation Scheme is recommended for use by all vessels traveling between the points involved, and is composed basically of four elements; **(1) Northbound Lanes, (2) Separation Zone, (3) Southbound Lanes, and (4) a Precautionary Area.** Traffic Lanes have been designed to aid in the prevention of collisions at the approaches to major harbors and along heavily traveled waters, but are not intended in any way to supersede or to alter the applicable Navigation Rules. Separation zones are intended to separate N and S traffic lanes, to be free of ship traffic, and should not be used except for crossing purposes. Mariners should use extreme caution when crossing traffic lanes and separation zones. Rule 10 of the collision regulations apply to this Traffic Separation Scheme.

(185) Extreme caution must be exercised in the Precautionary Area off the entrances to Los Angeles and Long Beach Harbors

as both incoming and outgoing vessels use this area. (See also Traffic Separation Schemes, chapter 1, for additional information.)

(186) **Ferry Routes** in the Gulf of Santa Catalina and San Pedro Channel differ from the Traffic Separation Scheme in that area. Mariners using the area's Traffic Separation Scheme are advised to **use caution and beware of crossing ferries** enroute between local coastal ports and ports at Santa Catalina Island.

(187) **Safety zones** have been established in San Pedro Bay, including around the oil drilling platforms, in

(188) 33°35'45"N., 118°08'27"W (**Platform Edith**);

(189) 33°35'00"N., 118°07'40"W (**Platform Elly**);

(190) 33°34'57"N., 118°07'42"W (**Platform Ellen**); and

(191) 33°33'50"N., 118°07'00"W (**Platform Eureka**). (See **147.1, 147.10, 147.1101, 147.1104, 147.1108, 147.1111, and 165.1113** chapter 2, for limits and regulations.)

(192) The **Marine Exchange** of Los Angeles and Long Beach records, classifies, and disseminates information on ship arrivals to, departure from, and movement within the Los Angeles/Long Beach harbors. The Exchange, about 0.4 mile N of Point Fermin, is manned 24-hours a day. It has a visual lookout, VHF-FM radiotelephone, visual communication capability, and a battery of landline telephones. The station, call sign KGW-299, monitors VHF-FM channel 16 and 13, and uses channel 14 for working.

(193) **Vessel Speed Reductions**, in addition to the mandatory 12 knot speed limit in the Los Angeles/Long Beach Vessel Traffic Service (VTS) Precautionary Area, the following excerpt is from Rule 402 from the South Coast Air Quality Management District (SCAQMD):

(194) The Port of Long Beach asks every vessel entering or leaving the port to observe the **voluntary 12-knot speed limit** that extends seaward 20 nautical miles from Point Fermin. Reducing ship speed will reduce exhaust emissions into Southern California's air, which will result in better air quality. The speed of every vessel in the speed reduction zone is measured and recorded by the Marine Exchange of Los Angeles/Long Beach; please contact the Marine Exchange for more information. Your cooperation with this important air quality improvement program is greatly appreciated.

(195) The **Vessel Traffic Service (VTS) Los Angeles/Long Beach,** operated by the Marine Exchange in cooperation with the U.S. Coast Guard, has been established within the approaches to the ports of Los Angeles and Long Beach.

(196) The Vessel Traffic Service is a California State mandatory service and is designed to enhance navigational safety in the main approaches to the ports of Los Angeles and Long Beach. Mandatory participation and monitoring of VHF-FM channel 14 is required by state law for participating vessels.

(197) **VTS Area:**

(198) The VTS Area consists of Los Angeles and Long Beach Harbors (inside the breakwater), and the waters of San Pedro Bay and San Pedro channel, including Santa Monica Bay, within a 25 nautical mile radius of Point Fermin Light. This includes all of the Precautionary Area and portions of the Traffic Separation Scheme Lanes.

(199) **VTS Communications:**

(200) The responsibility of information exchange in the VTS Area outside the breakwater will be handled by the Marine Exchange Vessel Traffic Center (VTC), and inside the breakwater by the appropriate Pilot Station.

(201) All reports and communications made to the VTC (voice call **"San Pedro Traffic"**) shall be on VHF-FM channel 14, to Los Angeles Pilots on VHF-FM channel 73, and to Long Beach Pilots on VHF-FM channel 12 or 74. All stations monitor VHF-FM channels 16 and 13.

(202) If arrival/departure information has been given and new data is received by the VTS, the VTS will attempt to contact vessels to pass the updated information. In addition, a traffic advisory broadcast is given on VHF-FM channel 14 every hour on the quarter hour. Other navigational information may be given on a case by case basis.

(203) **Mandatory Full Participation:**

(204) The following vessels are required to comply with Vessel Movement and Reporting Procedures:

(205) (a) Every power driven vessel 40 meters (approximately 131 feet) or more in length while navigating;

(206) (b) Commercial towing vessels 8 meters (approximately 26 feet) or more in length that are towing alongside, astern, or by pushing ahead;

(207) (c) Every vessel certified to carry 50 or more passengers for hire while engaged in trade, under sail or power.

(208) **Mandatory Passive Participation:**

(209) These vessels are required to monitor VHF-FM channel 14 and must respond when hailed by the VTS and must comply with operating rules;

(210) (a) Power driven vessels of 20 meters (approximately 65 feet) or more in length;

(211) (b) Vessels of 100 gross tons or more carrying one or more passengers for hire, while engaged in trade, regardless of length, whether under sail or power;

(212) (c) Every dredge or floating plant.

(213) **Non Participating Vessels:**

(214) Other vessels such as fishing boats, yachts, and recreational boats can greatly enhance the safety of navigation in the VTS area by listening on VHF-FM channel 14 and by maintaining a sharp lookout. It is not necessary to participate actively.

(215) **Vessel Movement and Reporting Procedures:**

(216) All participating vessels when underway and entering the VTS Area from sea shall contact the VTC on VHF-FM channel 14 and report the following information:

(217) (a) Vessel name/call sign.

(218) (b) Course and speed.

(219) (c) Vessel destination.

(220) (d) State whether taking on a pilot or being piloted by master/commanding officer.

(221) (e) ETA breakwater sea buoy/pilot station.

(222) **Entering the Precautionary Area:**

(223) Prior to entering the Precautionary Area, all participating vessels shall:

(224) (a) Contact the VTC and report that the master/commanding officer is on the bridge and the vessel is being steered by hand.

(225) (b) Vessels under 40 meters subject to USCG/IMO standards shall have the senior licensed or certified person on board to be in charge of the navigation of the vessel when underway within the Precautionary Area.

(226) (c) Vessels of 40 meters or greater, when in the Precautionary Area, shall not exceed 12 knots.

(227) (d) Vessels when underway within the Precautionary Area should maintain a minimum vessel separation of .25 nautical mile (460 meters).

(228) (e) Vessels crossing the Precautionary Area, maneuvering in an unusual manner (i.e. compass/RDF calibration or drills/ ex-

ercises), and arriving/departing anchorages outside the breakwater shall notify the VTC and advise of their intentions.

(229) **Entering the Pilot Areas:**

(230) (a) All vessels shall contact the appropriate pilot stations prior to entering the pilot areas to receive vessel traffic information inside the breakwater. Vessels shall provide the following information to pilot stations:

(231) (1) Vessel name/call sign.

(232) (2) ETA breakwater or sea buoy/pilot station.

(233) (3) Vessel destination.

(234) **Departing Berth or Anchorage:**

(235) (a) All vessels shall contact the appropriate pilot station prior to departing a berth or anchorage to receive vessel traffic information inside the breakwater. Provide the following information to the pilot station:

(236) (1) Vessel name/call sign.

(237) (2) Advise who is piloting vessel.

(238) (3) Vessel destination, whether to sea or destination within harbor.

(239) (b) All outbound vessels shall notify VTC on VHF-FM channel 14 at least 15 minutes prior to passing breakwater entrance, including Anaheim Bay, and provide the following information:

(240) (1) Vessel name/call sign.

(241) (2) Vessel destination port or direction of departure, and advise if the vessel will be using or crossing the Traffic Separation Scheme.

(242) (3) Advise VTC when leaving the Precautionary Area and when leaving the VTS Area.

(243) All vessels shall comply with Navigation Rules (having particular regard for rules for vessels operating in and near Traffic Separation Schemes) and with the rules of the Regulated Navigation Area in San Pedro Bay (See **165.1 through 165.13 and 165.1152,** chapter 2, for limits and regulations.)

(244) Participating vessels are to ensure that a copy of the **Vessel Traffic Operating Manual** is available on board the vessel when operating within the VTS area. The manual is available at no charge from Executive Director, Marine Exchange of Los Angeles/Long Beach Harbor, P.O. Box 1949, San Pedro, CA 90733, phone (310) 832-6411.

(245) **Local Regulations.–**An "Escort Tug," as defined by California regulations, is a tug that is designed primarily for pushing or pulling ahead or astern, or towing alongside another vessel. A tug is considered to be designed for escort work whether or not it is involved in such activity. In the harbors of Los Angeles/Long Beach, an "Assist/Escort Tug" means any tug that is accepted by the tank vessel master and/or pilot to escort a tank vessel that is transiting waters where an assist/escort is required. Arrangements should be made via the vessel agent, tug company and appropriate pilot service. Outbound laden tank vessels are not required to use tugs once they have safely cleared the breakwater. All tank vessels shifting within the harbor(s) (including dock to anchor, anchor to anchor, and dock to dock) shall comply with the escort requirements. Arrangements should be made via the vessel agent, tug company or appropriate pilot service to ensure compliance.

(246) The State of California has established Tank Vessel Escort Regulations for tank vessels underway in the Los Angeles/Long Beach Harbor and their approaches. The full text of the regulations can be found on the Internet at http://www.dfg.ca.gov/Ospr/regulation.html or can be obtained from the California Office of Spill Prevention and Response 24-hour Communications Center at (916) 445-0045.

(247) Tug Escort Applicability: All laden tank vessels (tankers or barges carrying as cargo a total volume of oil greater than or equal to 5,000 long tons of oil) entering the port should ensure proper implementation of the Displacement Ton/Tug Braking Force Table listed below. In addition, to meet the requirements of the **Force Selection Matrix**, tractor tugs shall be tethered, inbound and outbound. Conventional tugs may be tethered or untethered inbound, but shall be tethered outbound. Inbound, laden Oil and Chemical Tank Vessels shall not proceed closer than two nm from the Federal Breakwater entrance unless the prescribed escort tug(s) are in position at the southern boundary of the pilot operating areas. Masters shall also ensure the anchors are ready for letting go prior to entering the pilot operating areas. The tank vessel master/pilot shall hold a "pre–escort conference" that should at a minimum include:

(248) 1. Contacting the escort tug operator to confirm the number and position of the escort tug(s); and

(249) 2. Establishing the radio frequency to be used; and

(250) 3. Establishing the destination of the tank vessel; and

(251) 4. Discussing any other pertinent information that the master/pilot and escort tug operator deem necessary.

(252) These standards reflect favorable circumstances and conditions. Adverse weather, unusual port/traffic congestion or other conditions/circumstances may require additional tugboat assistance.

(253) (See **33 CFR 157**, chapter 2, for regulations for Tank Vessels Carrying Oil in Bulk and Maneuvering Performance Capability.)

(254) **Los Angeles Harbor,** at the W end of San Pedro Bay, includes the districts of **San Pedro, Wilmington,** and a major portion of Terminal Island.

(255) **Long Beach Harbor,** in the E part of San Pedro Bay, includes the City of Long Beach and a portion of Terminal Island. Long Beach and Los Angeles Harbors are connected by Cerritos Channel. The distance between the seaward entrance to the two harbors is about 4 miles. Long Beach Inner Harbor, Middle Harbor, and Southeast Basin are protected by three curving moles.

(256) Four oil production islands, marked by lights, are to the N and E of Long Beach Pier J. A fog signal is sounded from the S end of each island.

(257) The **Port of Los Angeles,** one of the largest ports on the Pacific coast, has a history of leading the Pacific coast ports in terms of tonnage handled. It has extensive facilities to accommodate all types of traffic, and it is the only southern California port at which passenger vessels call regularly. Some of the principal exports are crude minerals, iron and steel scrap, coal and coke, inorganic chemicals, animal feeds, cotton, hides and skins, manufactured fertilizers, and fresh fruits and nuts. Some of the principal imports are iron and steel products, motor vehicles and parts, organic chemicals, fresh fruits and nuts, paper and paperboard, sugar, molasses and syrups, glass, and fresh and frozen fish.

(258) The **Port of Long Beach,** also one of the largest ports on the Pacific coast, has the reputation of being America's most modern port. It has extensive foreign and domestic traffic with modern facilities for the largest vessels. It is a major container cargo port with several of the largest and most efficient container terminals on the Pacific coast. Some of the principal exports are bulk petroleum, bulk coke, steel and steel products, bulk potash, grains, fresh fruits, scrap steel, animal feed, and copper concen-

Section 851.27 Force Selection Matrix

TANKER DISPLACEMENT	TRACTOR TUGS			CONVENTIONAL TUGS				
	AHEAD FORCES FOR TUGS USING STERN LINE (VSP) ASTERN FORCES FOR TUGS USING HEADLINE (ASD)		2ND TUG RATIO	AHEAD FORCES		2ND TUG RATIO	ASTERN FORCES	
LONG TONS	KIPS	SHORT TONS	RT2	KIPS	SHORT TONS	RC2	KIPS	SHORT TONS
0<60,000	20	10	2.7	50	25	1.2	30	15
60,000<100,000	40	20	2.7	60	30	1.3	50	25
100,000<140,000	50	25	2.7	80	40	1.4	80	40
140,000<180,000	60	30	2.8	120	60	1.4	100	50
180,000<212,000	90	45	3.8	220	110	1.6	120	60
212,000<220,000	100	50	3.8	250	125	1.6	120	60
220,000<260,000	120	60	5.3	410	205	1.6	140	70
260,000<300,000	140	70	5.4	480	240	1.6	160	80
300,000<340,000	170	85	5.6	590	295	1.6	190	95

Small Tank Barge Matrix

Total Displacement Tonnage of the Tank Barge and the Primary Towing Tug	Minimum Required Escort Tug(s) Static Bollard Pull in Short Tons	
0 to 20,000 displacement tons	**Tethered Escort Tug(s)**	**Untethered Escort Tug(s)**
	10 short tons	15 short tons
>20,000 displacement tons	**Tethered Escort Tug(s)**	
	A total astern static bollard pull (in pounds) equal to or greater than the sum of both the primary towing tug and the barge's total displacement tonnage. For example, where the total towing tug and tank barge displacement is 25,000 displacement tons, the escort tug(s) astern static bollard pull shall be at least 25,000 pounds or 12.5 short tons.	

trate. Some of the principal imports are crude petroleum, steel and steel products, motor vehicles and parts, machinery, bulk gypsum, newsprint, lumber, bulk salt, bananas, plywood, bulk molasses, and copra.

(259) **Prominent features.–San Pedro Hill** (chart 18746), 3.3 miles NW of Point Fermin, is the distinguishing feature for making San Pedro Bay from SE or W. The hill terminates seaward in steep, rocky cliffs about 60 feet high, with several horizontal terraces between them and the summit. On top of the summit are two large white radar domes.

(260) Because it is high above the usual low-lying fog area, the lighted tower atop Santa Catalina Island is reported a useful guide for vessels approaching the Los Angeles-Long Beach area; the light can be seen for about 16 miles.

(261) **Point Fermin,** the SE extremity of San Pedro Hill, is a bold cliff about 100 feet high. A light is shown from a pole 120 feet above the water. A prominent pavillion (The Bell of Friendship) is on the high ground about 0.3 mile N of the light.

(262) **Signal Hill,** Long Beach, rises to a height of 355 feet about 2 miles from the beach, and is readily recognized because of several radio towers around it.

(263) Two prominent charted objects in Los Angeles Harbor which are of use to the navigator are the green and white tank near the S end of Pier 1 and the lighted radio tower atop San Pedro City Hall.

(264) In Long Beach Harbor, prominent charted objects are the SW rectangular part of the charted L-shaped building at Berth F211 (which is the prominent gray rectangular tower of the Koch Carbon Terminal), a green hotel tower (marked by a large blue letter "b") located just NW of the Municipal Auditorium, and the white stone tower of another hotel 0.4 mile E, and the lighted large white dome on the S side of the entrance to Queensway Bay. The derricks on the artificial oil islands E of Long Beach Pier J are constructed to appear as high-rise apartment buildings. A private light is atop the Long Beach Harbor Department Administration Building, 1.2 miles NW of the SE corner of Pier J.

(265) **Breakwaters.–San Pedro Breakwater** extends about 0.9 mile in a SE direction from the E side of Point Fermin, then turns

ENE for another 0.9 mile to Los Angeles Light. **Middle Breakwater** extends ENE for 2.1 miles from the Los Angeles entrance, thence E for 1 mile to the Long Beach entrance, and is marked at both ends by lights. **Long Beach Breakwater** extends E 2.2 miles from Long Beach entrance and is marked by lights on both ends. Ranges for a **090°–270° measured nautical mile** are on the Long Beach Breakwater. They are yellow diamond-shaped daymarks on iron pipes.

(266) **Kelp beds** are along the inside edge of the W end of Middle Breakwater and about midway along the inside edge of San Pedro Breakwater; the E bed is marked by orange and white banded drums and the W bed by white floats.

(267) **Los Angeles Light,** (33°42.5'N., 118°15.1'W.), 73 feet above the water, is shown from a 69-foot white cylindrical tower on a concrete block on the outer end of the San Pedro Breakwater. A fog signal is at the light.

(268) A light is shown from a white skeleton tower on a white concrete house on the W end of Middle Breakwater. **Long Beach Light** (33°43.4'N., 118°11.2'W.), 50 feet above the water, is shown from a 42-foot white rectangular tower on a white building on the E end of Middle Breakwater; a fog signal is at the light. A light is shown from a white skeleton tower on the W end of Long Beach Breakwater, and another light is shown from a skeleton tower on the E end of the breakwater. A fog signal is at the E end light.

(269) **Note:** The Long Beach Pilots have established a current meter in about 57 feet of water 0.41 mile and bearing 198.5º from the Long Beach Light. A cable runs from the meter to the Long Beach Light. Mariners are requested to avoid anchoring or bottom fishing in this area.

(270) The Los Angeles and Long Beach breakwater entrances, the pilot areas, and Commercial Anchorage G are in a **regulated navigation area.** (See **165.1 through 165.13 and 165.1109**, chapter 2, for limits and regulations.)

(271) Vessels making the breakwater entrances should proceed at speeds no greater than is necessary for steerage. Vessels that approach the entrance close in and attempt to turn at or near the entrance are in danger of collision with outbound vessels, especially with smaller craft at night when their lights are not easily distinguishable at low tide or against the background of lights in the harbor.

(272) Vessels awaiting a pilot should stay well to seaward and E of the outer fairway buoys.

(273) **COLREGS Demarcation Lines.**–The lines established for San Pedro Bay are described in **80.1114,** chapter 2.

(274) **Channels.**–**Long Beach Channel** leads NW from W of Long Beach Breakwater for 2.2 miles to **Middle Harbor,** thence N to **Back Channel** and the **Inner Harbor.** The channel has a slight "dogleg" 1.5 miles NW of the breakwater to facilitate passage in and out of the Pier J berthing areas. A **restricted harbor entrance area** has been designated in the channel and side areas which extends from about 1 mile N of the breakwater to inside Middle Harbor; regulations of the Board of Harbor Commissioners, Port of Long Beach, grant priority to outbound vessels and stipulate a **6-knot speed limit** in this restricted area.

(275) Most of the channels in Long Beach Harbor are maintained at more than the project depth of 35 feet. (See Notice to Mariners and latest editions of charts for controlling depths.)

(276) **Los Angeles Main Channel** leads NW from E of the San Pedro Breakwater for about 1 mile, thence N to the Inner Harbor turning basin, thence NE through **East Basin Channel** and **Cerritos Channel.** About 0.6 mile NW of the breakwater, **Super Tanker Channel** leads W from the Main Channel to the deep-draft facilities at Berths 45–50. Los Angeles Main Channel from the breakwater to the Super Tanker Channel and the Super Tanker Channel are maintained at more than the project depth of 45 feet and 40 feet, respectively. (See Notice to Mariners and latest editions of charts for controlling depths.)

(277) Los Angeles Main Channel is marked by a **296º** lighted range, and the Super Tanker Channel is marked by a private **255º** lighted range.

(278) **Caution.**–Vessels should keep clear of the 500-foot-wide Los Angeles Main Channel during the passage of deep-laden tankships to and from Berths 45-47. These vessels, because of their deep draft, must remain in the channel. Vessels not carrying a Los Angeles pilot may obtain information on the movement of such vessels by contacting the Los Angeles Pilot Station on VHF-FM channel 73, call sign KEB-260; or on VHF-FM channel 16 (156.80 MHz).

(279) Two separate **safety zones** have been established on the waters of San Pedro Bay near the Los Angeles main channel entrance. (See **165.1 through 165.7, 165.23, and 165.1110**, chapter 2, for limits and regulations.)

(280) **Fish Harbor,** on the S side of Terminal Island near its W end, is protected by two sets of breakwaters and the mole of Pier 300, the outer ends of which are marked by lights; a fog signal is at the offshore end of the W outer breakwater. A dredged channel with a controlling depth of about 14 feet leads between the outer and inner breakwaters to Fish Harbor, which has controlling depths of about 16 to 18 feet. The seawall is lined with canneries and other fishworks. The outer breakwaters enclose the Yacht Club Anchorage, sometimes called the Fish Harbor Extension. This anchorage has depths of 17 to 20 feet E and depths of 11 to 14 feet W of the dredged channel.

(281) **Anchorages.**–Limits and regulations of general, naval, explosives, and special anchorage areas in San Pedro Bay are given in **110.1, 110.100,** and **110.214,** chapter 2. When inside the breakwaters, vessels are required to anchor in the anchorage area prescribed in the regulations except in cases of great emergency. The Santa Ana is the only wind dangerous to vessels anchored inside the breakwaters.

(282) Vessels are cautioned against anchoring in the vicinity of pipeline and cable areas shown on the charts.

(283) **Dangers.**–A shoal area, with a rock covered 3 feet and a rock awash near the outer end, extends about 0.3 mile S of the shore just E of Point Fermin Light. A lighted whistle buoy is about 300 yards SW from the S end of the shoal area.

(284) A **naval restricted area** is in the West Basin off the S shore of Terminal Island inside the jetty of the Naval Base Mole. (See **334.990**, chapter 2, for limits and regulations.)

(285) In March 1980, a submerged obstruction was reported about 0.35 mile NE of Long Beach Breakwater East End Light 1, in about 33°43'37.1"N., 118°07'48.8"W.

(286) **Bridges.**–The Vincent Thomas Bridge, a highway suspension span with a clearance of 185 feet over the center 500-foot width, crosses Los Angeles Main Channel just below the turning basin, 3.2 miles above the entrance breakwater.

(287) Two bridges cross Cerritos Channel on the N side of Terminal Island: Schuyler F. Heim Highway Bridge with span clearance of 38 feet down and 163 feet up; and Henry Ford (Badger) Avenue railroad bridge 25 yards W with authorized span clearances of 6 feet down and 165 feet up. The Henry Ford (Badger)

Avenue railroad bridge is maintained in the down position. The bridgetender of the Schuyler F. Heim bridge monitors VHF-FM channel 13; call sign WHX-947. (See **117.1 through 117.59 and 117.147**, chapter 2, for drawbridge regulations.)

(288) It is reported that clearance gages have been established on a pier flanking the navigable span of the Schuyler F. Heim Bridge and on the dolphins flanking the Henry Ford Avenue railroad bridge. The gages indicate the vertical navigational clearance beneath each of the bridges at any height of tide.

(289) Near the E end of Cerritos Channel are several power cables that have a clearance of 155 feet. Vessels are required to have a clearance of at least 6 feet under the cables to avoid the danger of arcing.

(290) The Gerald Desmond Bridge, across Back Channel between Long Beach Inner Harbor and Middle Harbor, has a fixed span with a clearance of 155 feet.

(291) The Queen's Way (Magnolia Avenue) Bridge, crossing **Queensway Bay** 0.8 mile W of oil **Island Grissom,** is a fixed span connecting downtown Long Beach with the terminal facilities on Pier J; clearances are 36 feet for the 500-foot main channel span or 45 feet at the center, and 31 feet elsewhere.

(292) **Tides.**–The mean range of tide in Los Angeles Harbor is 3.8 feet, and in Long Beach inner and outer harbors the mean range is 3.7 feet. The diurnal range of tide is about 5.4 feet for these harbors. A range of about 9 feet may occur at times of maximum tides. The time of tide is about the same for Los Angeles and Long Beach Harbors. Daily predictions are given in the Tide Tables.

(293) **Currents.**–The tidal currents follow the axis of the channels and rarely exceed 1 knot.

(294) **Surge.**–Both Los Angeles and Long Beach Harbors are subject to seiche and surge. The most persistent and conspicuous oscillation has a period of approximately 1 hour. In the vicinity of Reservation Point and near the E end of Terminal Island, the hourly surge is very prominent, causing velocity variations which at times may be as great as 1 knot, and which often overcome the lesser tidal current so that the current floods and ebbs at half-hour intervals. Because of the more restricted channel, the surge through Back Channel at the E end of Terminal Island usually reaches a greater velocity than through the channel W of Reservation Point. In Back Channel, the hourly variation may sometimes be 1.5 knots or more. The hourly surge, together with other oscillations of shorter period and of more irregular occurrence, at times causes a very rapid change both in height of the water and the velocity and direction of the current and may endanger vessels tied up at the piers. A 3-minute surge is reported to be responsible for major ship movements and damage. Pilots advise taut lines to reduce the effect of the surge.

(295) **Weather, Los Angeles**.–Fog is most likely from October through February. Out over the bay, it drops visibilities below 0.5 mile (0.9 km) on about 11 days per month during this period. It is mostly a land (radiation) fog that drifts out and is worst in the late night and early morning. Smoke from nearby industrial areas often adds to the thickness and persistence of the fog. There are times when it will hang over the inner channels for several days and along the coast can be very local in occurrence. For example, at Long Beach, which is particularly susceptible to cold air drainage, fog reduces visibilities to less than 0.5 mile (0.9 km) on an average of 18 more days annually than at nearby Los Angeles International Airport. Along the shores, visibilities drop to less than 0.5 mile (0.9 km) on about 3 to 8 days per month from August through April; December is usually the worst month.

(296) Winds are variable particularly in fall and winter. They are also strongest during this period when the **Santa Ana** wind can blow. This is an offshore desert wind which, though infrequent, may be violent. It occurs when a strong high-pressure system sits over the plateau region and generates a NE to E flow over southern California. The air streams through Cajon Pass into the Great Valley, swings toward the SW, and follows either the Santa Ana River Canyon through the Santa Ana Mountains or moves directly over the low mountains S of the canyon and then follows a well-defined path over the plains of Orange County to reach the ocean near Newport. It diminishes little in intensity immediately after passing over the bay, and some reports credit it with blowing far out to sea. However, beyond 50 miles (93 km) from shore, Santa Anas are of little concern. These winds have reached speeds of 50 knots or more along the coast.

(297) Aside from weather forecasts, there is little warning of the onset of a Santa Ana. For some hours preceding its arrival, good visibility and unusually low humidity often prevail. Shortly before its arrival on the coast, the Santa Ana may be observed as an approaching dark-brown dust cloud. This will often give from 10 to 30 minutes warning, and is a positive indication. The Santa Ana may come at any time of the day. It can be reinforced by a land breeze in the early morning or weakened by a sea breeze during the afternoon.

(298) Winter storms are also responsible for strong winds over San Pedro Bay, particularly from the SW through NW. Winds of 17 knots or greater occur about 1 to 2 percent of the time from November through May. Winter winds often have an E component, although WNW winds are most frequent at Long Beach. At Los Angeles International Airport, W and NE winds are the most common, while at Los Alamitos, NE, E, and SW winds are frequent. However, at both locations, calm conditions are as common or more so from fall through spring. SW through W winds begin to prevail in spring, and this lasts through the summer and into early fall. Gales are rare and have occurred occasionally during March and November. March, April, and May are the windiest months and December the most calm. An all-time peak gust of 54 knots was recorded in March 1952.

(299) The average temperature for Los Angeles is 63°F (17.2°C). The average high is 70°F (21.1°C) and the average low is 55°F (12.8°C). Every month has recorded temperatures in excess of 90°F (32.2°C) except January. The all-time maximum is 110°F (43.3°C) recorded in September of 1963. The all-time minimum is 27°F (-2.8°C) recorded in January of 1949. April, June, September, October, and November have each had temperatures in excess of 100 F (37.8°C). August is the warmest month and January the coolest.

(300) The average annual precipitation at Los Angeles is just under twelve inches (305 mm). The average number of days with precipitation is 60 each year. The driest month is July when only 0.02 inches (0.51 mm) can be expected and the wettest month is January with an average monthly rainfall of 2.88 inches (71.1 mm). July and August each average only two days per month with measurable precipitation while January and March average eight days each with measurable rainfall. The driest year on record is 1947 when only 3.11 inches (79 mm) of rain fell and the wettest year on record is 1983 when 29.46 inches (748 mm) of precipitation was recorded. Only trace amounts of snowfall have

been recorded in Los Angeles and January is the only month of this occurrence.

(301) The National Weather Service maintains an office at Long Beach Airport, Los Angeles International Airport, and downtown Los Angeles (see appendix for address). Barometers may be compared at these locations or by telephone.

(302) (See page T–2 for **Los Angeles climatological table.**)

(303) **Pilotage, Port of Los Angeles.–**All vessels 300 gross registered tons and over and all foreign vessels leaving, entering, or shifting within the Port of Los Angeles are subject to pilotage. Vessels licensed and engaged in the fishing trade and enrolled vessels of the United States under the direction of an officer federally licensed for the port are exempt from pilotage.

(304) The Port of Los Angeles Port Pilots board vessels from one of two pilot boats in the vicinity of the Los Angeles Approach Channel Lighted Buoy 1. Supertankers and very deep laden vessels will be boarded about 3 miles SE of Los Angeles Light. The Pilot boats, STEPHEN M. WHITE and PHINEAS BANNING, have black hulls and white cabins with L.A. PILOTS displayed on each side. The pilot station is at the SE end of Pier 1. Pilotage can be arranged through the pilot station, telephone 310-732-3805, or VHF-FM channels 73 and 16; call sign KEB-260. The pilot station and boats monitor and use as working frequencies VHF-FM channels 73, 14, and 16. The pilot boats display the standard day and night signals. The pilot station requests 2 hours advance notice of estimated time of arrival on VHF-FM channel 73. The pilots normally board the vessels on the starboard side with the ladder about 1 meter above the water. Vessels may not be boarded during periods of poor visibility or severe weather.

(305) **Pilotage, Port of Long Beach**.–All foreign vessels and U.S. vessels of 300 gross registered tons and over sailing under register are subject to a pilotage fee whether or not a municipal pilot is actually employed. Vessels sailing under U.S. enrollment and licensed and engaged in coastwise, intercoastal, or fishing trades under the direction of an officer federally licensed for the port are exempt from pilotage unless a municipal pilot is employed.

(306) The Jacobsen Pilot Service, Inc., handles pilotage for San Pedro Bay, Los Angeles Harbor, Anaheim Bay, and primarily Long Beach Harbor. The pilots board vessels 1 mile S of Long Beach Approach Lighted Whistle Buoy LB. Large deep-draft vessels are boarded 2 miles or more S of the approach buoy. The pilot boats, VENUS and POLARIS, have grey hulls and white cabins with LONG BEACH PILOTS displayed on each side. The pilot station is at the NW end of Pier F. Pilotage can be arranged by telephone (562-432-0664), fax (562-432-3597) and VHF-FM channels 12 and 74. The pilot station monitors VHF-FM channels 12 and 16; the pilot boats monitor VHF-FM channels 12, 13, 14, and 16. The pilot boats display the standard day and night signals. The pilot station requests 2 hours advance notice of estimated time of arrival (ETA) by radiotelephone; call sign, KMA-372. Vessels should state name, call sign, ETA at the pickup station, and draft, and for vessels equipped with bow or stern thrusters, the operational status of the thrusters. Vessels will be given information regarding the desired lee for boarding. In normal weather, pilots board on the starboard side, with the ladder about 1 meter above the water, and a moderate speed. Accommodation ladders must not be used outside the breakwater. In very thick fog vessels may be requested to anchor outside the breakwater in Anchorage F.

(307) **Towage.**–Several tugboat companies operate in the Los Angeles-Long Beach area with tugs up to 5,000 hp available. Large vessels usually have one or more tugs in attendance while berthing at or departing from the wharves along the inner channels.

(308) Los Angeles and Long Beach are both **customs ports of entry.**

(309) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(310) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(311) **Coast Guard.**–A **marine safety office** is located in the Los Angeles/Long Beach Harbor complex. (See appendix for addresses.)

(312) **Los Angeles/Long Beach Coast Guard Station** is on the E side of Main Channel at **Reservation Point**.

(313) **Harbor regulations.**–Local rules and regulations for the Port of Los Angeles are enforced by the Port Warden of the Harbor Department. The Los Angeles Harbor Department Headquarters are at 425 South Palos Verdes Street, San Pedro.

(314) Similar regulations for the Port of Long Beach are enforced by the Executive Director of the Harbor Department assigned by a Board of Harbor Commissioners. The Long Beach Harbor Department Administration Building is on Pier "G" at 925 Harbor Plaza, Long Beach. The **speed limit** for Middle Harbor and Inner Harbor is 6 knots.

(315) Permits are required from the Port Warden for any method of underwater diving within Los Angeles Harbor. Similarly, a permit from the Port Manager is required in Long Beach Harbor.

(316) Copies of the regulations may be obtained from the local office concerned.

(317) **Wharves.**–The Port of Los Angeles has over 100 piers and wharves. Only the deep-draft facilities are described. For a complete description of the port facilities refer to Port Series No. 28, published and sold by the U.S. Army Corps of Engineers. (See appendix for address.) The alongside depths for the facilities described are reported depths. (For information on the latest depths contact the Port of Los Angeles or the private operators.) Most of the piers and wharves are owned by the City of Los Angeles. Most of the piers and wharves have water and electrical shore power connections, and highway and railroad connections.

(318) General cargo at the port is usually handled by ship's tackle. Special handling equipment, if available, is mentioned in the description of the particular facility. Floating cranes up to 425 tons are available.

(319) The office of the chief wharfinger is at 425 South Palos Verdes Street, San Pedro.

(320) **Facilities in Los Angeles Outer Harbor:**

(321) Berths 45-47 (supertanker terminal): 1,063 feet berthing space with mooring platforms; 47 feet alongside; deck height, 16 feet; two hydraulically-operated unloading arms; receipt of crude oil, operated by GATX Terminals Corp.

(322) Berths 54-55: 1,340 feet of berthing space; 34 feet alongside; deck height, 14 feet; 211,290 square feet of covered storage; receipt and shipment of general cargo including cotton and refrigerated cargo; operated by Stevedoring Services of America.

(323) Berth 56: 140 feet of berthing space; 35 feet alongside; deck height, 14 feet; mooring research vessels; operated by State of California, Department of Fish and Game.

(324) Berth 57: 520 feet of berthing space; 33 to 38 feet alongside; deck height, 14 feet ; mooring vessels for outfitting and repair; mooring floating drydock; operated by San Pedro Boat Works Inc.

(325) Berths 58-60: 1,960 feet of berthing space; 33 to 38 feet alongside; deck height, 14 feet; 174,000 square feet of covered storage; mooring vessels; operated by San Pedro Boat Works, Inc. and Port of Los Angeles.

(326) Berths 70-71 (petrochemical terminal): 800 feet of berthing space with dolphins; 35 feet alongside; deck height, 15 feet; oil and chemical pipelines extend from wharf to storage; 136 storage tanks, total capacity 593,000 barrels; receipt and shipment of petrochemicals; receipt of petroleum products and chemicals; operated by Westway Terminal Co.

(327) Berth 72: 415 feet of berthing space; 34 feet alongside; deck height, 14 feet; receipt of seafood; operated by various operators.

(328) **Facilities on W side of Main Channel:**

(329) Berths 91,92, 93A-93B: 2,850 feet of berthing space; 37 feet alongside; deck height, 15 feet; two-story terminal building, lower level for cargo, upper level for passengers; baggage conveyors and gangways extending from passenger terminal (upper deck) to ship side; passenger terminal served by elevators and escalators; 130,600 square feet covered storage, 50,000 square feet of open storage area back of shed, 60,000 square feet of open storage in rear of berth 93C, auto parking and maintenance area of about 108,000 square feet in NW section of terminal yard; pipelines extend from berths to storage; mooring cruise ships; operated by Los Angeles Cruise Ship Terminal, Inc.

(330) **Facilities in Southwest Slip and West Basin:**

(331) Berths 118-119: 821 feet long; 33 to 37 feet alongside; deck height, 13 feet; pipelines extend from berths to 18 storage tanks with total capacity of 517,000 barrels; receipt and shipment of petroleum products; receipt of crude oil; bunkering vessels; loading barges; operated by GATX Terminals Corp.

(332) Berth 120: 401 feet of berthing space; 31 to 36 feet alongside; deck height, 13 feet; pipelines extend from berths to storage; 75 tanks, total capacity 2½ million barrels; receipt and shipment of petrochemicals and petroleum products; receipt of liquified petroleum gas; bunkering vessels; loading barges; operated by Western Fuel Oil Co., Amerigas.

(333) Berths 121-126: 2,000 feet of berthing space; 45 feet alongside; deck height, 15 feet; storage for 3,000 containers, 380 reefer slots; 45 truck loading stations; five 40-ton cranes; bunkering services available; operated by Marine Terminals Corp. serving Yang Ming Line, COSCO North America, and Trans Pacific Line.

(334) Berths 127-131: 1,950 feet of berthing space; deck height, 15 feet; 35 feet alongside; paved open storage for 4,228 containers, 144 spaces for refrigerated containers, total area 63 acres; four 40-ton container cranes; receipt and shipment of containerized cargo in foreign trade; operated by Marine Terminals Corp.

(335) Berths 136-139 and 142: 2,051 feet long; 38 feet alongside; deck height, 15 feet; 88 acres of open storage; four 40-ton mobile cranes; molasses pipelines extend from wharf to storage; receipt and shipment of general cargo; receipt of bananas and coffee; operated by Trans Pacific Container Service Corp. serving Mitsui O.S.K., Dole, CSAV/Chilean & PM Line.

(336) Berths 142-147: 1,665 feet of berthing space; 34 to 35 feet alongside; deck height, 14 to 15 feet; 127,150 square feet covered storage; molasses pipeline from Berth 142 to storage; receipt and shipment of conventional containerized, and roll-on/roll-off general cargo; receipt of steel products, molasses, heavy equipment and machinery; operated by Rio Doce Pasha Omni Terminal.

(337) Berths 148-149: 608 feet of berthing space; 33 feet alongside; deck height, 15½ feet; one hose-handling derrick; pipelines extend from berths to 26 storage tanks with total capacity of 839,000 barrels; receipt and shipment of petroleum products; receipt of liquid chemicals and caustic soda; operated by Tosco Corp.

(338) Berths 150-151: 736 feet of berthing space; 33 feet alongside; deck height, 14 feet; pipelines extend from berths to storage; six ½-ton hose-handling derricks; receipt and shipment of petroleum products, receipt of liquid chemicals and caustic soda; bunkering vessels; loading fuel barges; operated by Tosco Corp.

(339) **Slip 1:**

(340) Berths 153-155: 1,766 feet of berthing space; 23 to 35 feet alongside; deck height, 12½ feet; 232,525 square feet of covered storage; operated by POLA.

(341) Berths 163-164: 1,005 feet of berthing space; 35 feet alongside; deck height, 12 feet; receipt and shipment of petroleum products; receipt of crude oil; bunkering vessels; pipelines extend from berths to storage; 44 tanks, total capacity of over 1 million barrels; operated by Ultramar & Wickland Petroleum Co.

(342) Berths 165-166: wharf in three sections, 679 feet, 125 feet and 20 feet; 37 feet alongside; deck height, 12 feet; 18,800 square feet of covered storage; bulk loader, loading rate between 900 and 1,200 tons per hour depending on the cargo; bulk storage 41,600 short tons; bulk and bagged borate and borate products; owned and operated by U.S. Borax and Chemical Co.

(343) Berths 167-169: 1,314 feet of berthing space with dolphins; 35 feet alongside; deck height, 12 feet; pipelines extend from wharf to storage tanks; 16 storage tanks, total capacity 535,000 barrels; five 1-ton derricks, each with two 35-foot booms; receipt and shipment of petroleum products; operated by Shell Oil Co.

(344) **East Basin Channel**:

(345) Berths 171-173: 1,412 feet of berthing space; 35 feet alongside; deck height, 12 feet; pipelines extend from berths to storage; 19 storage tanks, total capacity 1 million barrels; receipt of crude oil; bunkering vessels; loading fuel barges; operated by GATX Terminal Corp.

(346) Berths 174-176: 1,312 feet of berthing space; 35 feet alongside; deck height, 11 feet; receipt and shipment of conventional general cargo, including steel, steel products, wheat seed, and plywood; operated by Pasha Maritime Services, Inc.

(347) **Slip 5**: Berths 177-179: 1,420 feet long; 35 feet alongside; deck height, 10 feet; 83,000 square feet of covered storage; 3 acres of open storage; receipt and shipment of conventional and containerized general cargo, including steel, steel products, wheat seed, and plywood; operated by Pasha Maritime Services, Inc.

(348) Berths 180-181: 925 feet of berthing space; 33 to 36 feet alongside; deck height, 10 feet; 74,500 square feet of covered storage; pipeline extends from Berth 181 to storage tanks; receipt and shipment of general cargo, including steel, steel products, wheat seed, and plywood; receipt of fuel oil for plant consumption, molasses, and liquid fertilizer; operated by Pasha Maritime Services, Inc., City of Los Angeles Department of Power and Water, and Pacific Molasses Co., Ltd.

(349) Berths 184-185: 230 feet of berthing space; 25 to 30 feet alongside; deck height, 11 feet; 51,000 square feet of covered storage; one 10-ton mobile crane; one 6-ton and one 2-ton forklift trucks, electric ramps for roll-on/roll-off cargo; receipt and shipment of general cargo for Santa Catalina Island by barge; mooring vessels; operated by Catalina Freight Line Co.

(350) Berths 187-190: 1,900 feet of berthing space; 35 to 38 feet alongside; deck height, 12 feet; pipelines extend from wharf to storage; 51 storage tanks, total capacity 626,000 barrels; receipt and occasional shipment of caustic soda and other chemicals; receipt of fuel and vegetable oils; loading barges; one hose-handling crane with 7-foot boom; operated by Wilmington Liquid Bulk Terminals, Inc.

(351) Berth 191: 503 feet long; 36 to 38 feet alongside; deck height, about 10 to 12 feet; 59,000 square feet of covered storage; 4.5 acres of open storage; receipt of cement from bulk carriers; operated by Wilmington Liquid Bulk Terminal.

(352) **East Basin**:

(353) Berths 195-198: 2,267 feet of berthing space; 35 to 37 feet alongside; deck height, 15 to 16 feet; 84.4 acres; receipt of automobiles; operated by Distribution and Auto Services Inc.

(354) **Terminal Island:**

(355) Berths 206-209: 2,225 of berthing space; 45 feet alongside; deck height, 15 feet; four gantry cranes, 30- to 37-ton capacities; yard cranes and container conveyor; 46,000 square feet of covered storage; paved open storage for 14,327 containers and 597 refrigerated containers, total area 83 acres; receipt and shipment of containerized and roll-on/roll-off cargo; owned and operated by Matson Terminals, Inc., subsidiary of Matson Navigation.

(356) Berths 210–211: 566 feet of berthing space with dolphins; 26 to 35 feet alongside; deck height, 12 feet; loading tower on wharf with 60-foot boom for shredded scrap metal; belt conveyor extends from scrap metal hammer mill and from open storage area to loading tower, loading rate 500 tons per hour; one 50-ton traveling gantry crane on wharf with 110-foot boom and magnets; bulldozers; shipment of scrap metal; operated by Hugo Neu-Proler Co.

(357) Berths 212-225: 7,650 feet of berthing space; 190 acres; 31 to 40 feet alongside (215-221), 26 to 33 feet alongside (222-225); ten container cranes, operated by Yusan Terminals Inc.

(358) Berths 226-236: 3,900 feet of berthing space; 45 feet alongside; deck height, 15 feet; 147 acres of paved open storage; six post panamax cranes, and two panamax cranes; operated by Evergreen Marine Corp. and Marine Terminals Corp.

(359) Berths 237-238: two 227-foot offshore wharves 238 feet apart, total of 810 feet of berthing space along both wharves and dolphins; 38 feet alongside; deck height, 14 feet; pipelines extend to storage; receipt and shipment of petroleum products; receipt of crude oil; bunkering vessels alongside, and loading fuel barges; operated by Mobil Oil Corp., d.b.a., West Coast Pipe Lines.

(360) Berths 240A and 240B: two 226-foot wharves 370 feet apart; 20 to 35 feet alongside; deck height, 14 feet; pipelines to storage; 22 storage tanks with capacity of over 1 million barrels; one hose-handling winch; receipt and shipment of petroleum products; receipt of crude oil; bunkering vessels, loading barges; operated by Mobil Oil Corp.

(361) Berth 301 (Los Angeles Export Terminal (LAXT): 1,000-foot wharf, 72 feet alongside; deck height, 16 feet; 120-acre dry bulk facility handles coal and petroleum coke.

(362) Berths 302-305: 4,000-foot container wharf; 50 feet alongside; deck height, 15 feet; 12 electric cranes; 262 acres of paved storage; operated by APL Limited.

(363) The **Port of Long Beach** has 66 piers and wharves. Only the deep-draft facilities are described. For a complete description of the port facilities refer to Port Series No. 28, published and sold by the U.S. Army Corps of Engineers. (See appendix for address.) The alongside depths for the facilities described are reported depths. (For information on the latest depths contact the Port of Long Beach or the private operators.) Most of the piers and wharves are in East and Southeast Basins. Several wharves in the Inner Harbor are privately owned and operated. Most of the major facilities are owned by the Port of Long Beach. Most of the piers and wharves have water and electrical shore power connections, and highway and railroad connections.

(364) General cargo at the port is usually handled by ship's tackle. Special handling equipment, if available, is mentioned in the description of the particular facility. Floating cranes up to 385 tons are available.

(365) The port of Long Beach has about 400 acres of open storage and about 1½ million square feet of warehouse storage space available.

(366) The office of the Chief Wharfinger is in the Port of Long Beach administration building, 925 Harbor Plaza, Long Beach.

(367) **Southeast Basin and Basin Six:**

(368) **Pier J:**

(369) Berths J226-J270: (container terminal): 2,711 feet of berthing space; 45 feet alongside; deck height, 15 feet; six traveling cranes; 64 acres of open storage; three 50-ton, two 40-ton, and one 30-ton ship to shore cranes; receipt and shipment of containerized general cargo; operated by Mearsk Pacific Ltd. Two marked breakwaters protect the pier.

(370) Berths J243-J247: (container terminal): 3,300 feet of berthing space with dolphins; 36 to 40 feet alongside; deck height, 16 feet; 100,000 square feet of covered storage; 57.4 acres of open storage; 685 wheeled reefer outlets; ten 50-ton traveling container cranes; six 40-ton transtainers; pipelines extend from wharf to storage; receipt and shipment of containerized and conventional general cargo; bunkering vessels; operated by Pacific Container Terminal.

(371) Berth J242: 600 feet of berthing space; 35 to 39 feet alongside; deck height, 15 feet; pipelines to storage tanks, total capacity 294,000 barrels; receipt of liquid chemicals, petrochemicals, petroleum products, and molasses; operated by Westway Trading Corporation.

(372) Berths J232-J234: 2,300 feet of berthing space; 36 to 45 feet alongside; deck height, 16 feet; 60,000 square foot container freight station; 68.4 acres of paved open storage; 264 spaces for refrigerated containers; five 50-long-ton and three 40-long-ton container cranes; receipt and shipment of containerized cargo; bunkering vessels; operated by International Transportation Services, Inc.

(373) **Pier G:**

(374) Berths G227-G230: 2,550 feet of berthing space; 42 to 47 feet alongside; deck height, 15 feet; 72,000 square foot container freight station; 92 acres of paved open storage; five 35-ton traveling container cranes; receipt and shipment of containerized cargo in foreign and domestic trade; bunkering vessels; operated by Sea-Land Service, Inc. and Maersk Line Agency.

(375) Berths G12-G15: 2,110 feet of berthing space; 35 to 52 feet alongside; deck height, 19 feet; 675,000 tons of storage ca-

pacity; two electric traveling bulk shiploaders, with 81-foot outboard reach boom; shipment of iron ore, iron ore pellets, potash and petroleum coke; operated by Metropolitan Stevedore Co.

(376) **Pier F:**

(377) Berth F211: 1,630 feet of berthing space; 31 to 36 feet alongside; deck height, 19 feet; pipelines extend from berths to storage; loading barges; operated by Koch Carbon Inc. and Chemoil Marine Terminal.

(378) Berth F210: 550 feet of berthing space; 39 to 40 feet alongside; deck height, 19 feet; open storage for 135,000 tons of salt; movable inclined electric belt conveyor system with receiving hopper extending from wharf to stockpile area; receipt of salt; bunkering vessels; operated by Morton Salt Co.

(379) Berth F208: 420 feet of berthing space; 29 to 33 feet alongside; deck height, 19 feet; pipelines extend from berth to storage; 50,000 square feet of storage space, 58,000-ton capacity; four electric unloaders; belt conveyor system; Kovako - B.V. vacuum discharge; receipt of dry bulk cement; bunkering vessels; operated by MCC-Lucky Cement Co.

(380) Berths F206-F207: 1,200 feet of berthing space; 31 to 33 feet alongside; deck height, 18 feet; 155,000 square feet of covered storage; 12.2 acres of open storage; receipt and shipment of conventional general cargo, steel, steel products, and lumber; bunkering vessels; operated by Stevedoring Services of America.

(381) Berths F204-F205: 1,265 feet of berthing space; 34 to 37 feet alongside; deck height, 18 feet; 135,000 square feet of covered storage; one container crane; receipt and shipment of conventional general cargo, steel, steel products, and lumber; bunkering vessels; operated by Cooper/T. Smith Stevedoring Co.

(382) Berths F6-F10: 2,700 feet of berthing space; 32-37 feet alongside; deck height, 9 feet; 74 acres of open storage; five 40-long-ton traveling container cranes; 240 reefer outlets; pipelines extend from berth to storage; receipt and shipment of general cargo; operated by Long Beach Container Terminal, Inc.

(383) **Pier E:**

(384) Berths E24-E26: 1,950 feet of berthing space, 30 to 40 feet alongside; deck height, 13 to 22 feet; 256,000 square feet of covered storage; 57.9 acres open storage; two roll-on/roll-off ramps; five 40-ton traveling container cranes; 400 reefer outlets; receipt and shipment of general cargo in containers, roll-on/roll-off; bunkering vessels; operated by California United Terminals Co., Inc.

(385) **Pier D:**

(386) Berths D28-D31: 1,985 feet of berthing space; 40 to 47 feet alongside; deck height, 10 to 12 feet; fixed bulk-loading tower; pipelines extend from berths to storage tank with 6-million-gallon capacity; 6.6 acres of open storage; shipment of dry bulk, including coke, salt cake, soda ash, fertilizer, iron ore, borax, and potash; receipt and shipment of vegetable oil and animal fats; bunkering vessels; operated by California United terminals Co. and Baker Commodities, Inc.

(387) Berths D32-D34; 1,100 feet of berthing space, 32 to 38 feet alongside; deck height, 13 to 14 feet, 66,000 square feet of covered storage; silos with a 50,000-ton capacity; screw-type unloader to conveyor directly to silos; pipelines extend from berths to storage; receipt and shipment of steel products, animal fats, and vegetable oil; receipt of bulk cement; bunkering vessels; operated by Pacific Coast Cement Corp. and various other operators.

(388) **Pier T:**

(389) Berth T121: 1,250 feet of berthing space; 65 to 68 feet alongside; deck height, 22 feet; pipelines extend from berth to storage; receipt of crude oil; bunkering vessels; operated by ARCO Pipeline Co.

(390) Berth T122: 600 feet of berthing space with dolphins, 32 to 35 feet alongside; deck height, 13 to 23 feet; 10.8 acres of paved open storage; receipt of lumber and lumber products; operated by Fremont Forest Products and Weyerhaeuser Co.

(391) Berth T118: 750 feet of berthing space; dockside vessel loading crane; receipt of recyclable metal and steel products; operated by Pacific Coast Recycling Co.

(392) **Inner Harbor (Channel Three):**

(393) **Pier D:**

(394) Berth D46: 640 feet of berthing space with dolphins; 29 to 35 feet alongside; deck height, 14 feet; belt-conveyor system, with rotating stacker; receipt of gypsum rock by self-unloading vessels; operated by G-P Gypsum Corp.

(395) Berths D48-D50: 1,798 feet of berthing space; 35 to 36 feet alongside; deck height, 17 feet; 1 acre of open storage; 112,000 square feet of covered storage; mooring company-owned tugs and other harbor craft; various operators.

(396) Berths D52-54: 1,312 feet of berthing space; 31 to 40 feet alongside; deck height, 11 feet; 494,800 square feet of berthing space; 31-40 feet alongside; deck height, 11 feet; 494,800 square feet of covered storage; 6.9 acres of open storage; receipt of newsprint and lumber by vessel and barge; operated by Forest Terminals.

(397) **Pier C:**

(398) Berth C58: wharf, 230 feet long; slip, 160 by 47 feet; 230 feet of berthing space; 20 to 44 feet alongside; deck height, 13 feet; one 40-ton mobile crane with a 60-foot boom; mooring company-owned floating equipment operated by ARCO Pipeline Co.

(399) Berths C60-C62: 1,804 feet of berthing space; 56.9 acres of open storage; three 40-long-ton container cranes; receipt of general cargo; operated by Pacific Maritime Service.

(400) **Inner Harbor (Channel Two):**

(401) **Pier C:**

(402) Berth C73: 375 feet of berthing space with dolphins; 35 to 40 feet alongside; deck height, 12 feet; pipelines extend from berths to storage; 9 storage tanks, total capacity 543,000 barrels; two hand-operated derrick with 24-foot booms; receipt of crude oil and petroleum products by vessel and barge; bunkering vessels and supplying bunkering barges; operated by Powerine Oil Co.

(403) Berths B76-B78: three offshore wharves; 2,192 feet of berthing space; 36 to 43 feet alongside; deck height, 14 feet; pipelines extend from the berths to storage; 40 tanks, with total capacity 2¼ million barrels; 18 hydraulic loading arms; six 1-ton pneumatic derricks with 27-foot hose-handling booms; receipt and shipment of crude oil; petroleum products and petrochemicals; bunkering vessels; supplying bunkering barges, operated by ARCO Terminal Services Corp.

(404) Berths B82-B83: 1,060 feet of berthing space; 30 to 39 feet alongside; deck height, 14 feet; 120 acres of paved open storage; pipelines extend from berths to storage; 7 tanks, total capacity 410,000 barrels receiving hopper with belt conveyor system; receipt of gypsum rock by self-unloading vessels; receipt of petroleum products and automobiles; operated by Petro-Diamond Terminal Co., National Gypsum Co., and Toyota Motor Sales, U.S.A.

(405) Berths B84-B87: 1,980 feet of berthing space with dolphins; 48 to 51 feet alongside; deck height, 16 feet; pipelines ex-

tend from berths to storage; 15 hydraulic loading arms; receipt of crude oil; receipt and shipment of petroleum products; bunkering vessels; supplying bunkering barges; operated by Equilon Enterprises.

(406) **Pier A:**

(407) Berths A90-A94: 3,600 feet of berthing space; 90 acres of open storage; six post-Panamax, Paceco-Mitsue container cranes; 652 terminal reefer outlets; receipt of general cargo; operated by Hanjin Shipping Co.

(408) **Pier S:**

(409) Berth S101: immediately W of Heim Lift Bridge, S side of Cerritos Channel; 357 feet of berthing space with dolphins; 38 to 45 feet alongside; deck height, 13 feet; pipelines extend from berths to storage; receipt and occasional shipment of liquid chemicals; operated by Dow Chemicals, U.S.A.

(410) The famous passenger liner QUEEN MARY, retired in 1967 and purchased by the Port of Long Beach, is moored on the NE side of Pier J, parallel to the skyline of the city of Long Beach. The ship is used as a floating museum, hotel, and convention center.

(411) The large lighted white dome S of the QUEEN MARY was once the exhibit center for Howard Hughes' famous flying boat SPRUCE GOOSE. The dome is now used for filming movies.

(412) **Supplies.**–Fuel oil, water, and marine supplies can be had in any quantity at both Los Angeles and Long Beach. Fuel oil can be supplied at the oil docks or by barge.

(413) **Repairs.**–Los Angeles Harbor is well equipped with marine repair plants; repairs of any size can be made. The largest drydock at Terminal Island has a lifting capacity of 22,000 tons, a length overall of 659 feet, a length on the blocks of 587 feet, a minimum clear width for vessels of 97 feet, and a maximum depth over the blocks of 25 feet. The drydock is of wood construction with six sections. The largest marine railway, at Berth 264 in the NE end of Fish Harbor, in East San Pedro, has a hauling power of 1,000 tons. There are a number of smaller facilities. There are no graving docks. The port is well equipped with wrecking and salvage facilities. A trained salvage crew and a corps of expert divers are ready at all times to render aid in any disaster to shipping along the coast and at distant localities.

(414) Long Beach Harbor is also well equipped for marine repairs. A variety of barge cranes are available in the 40- to 275-ton capacity range. The largest graving dock is 141 feet wide, 1,093 feet long with 39 feet over the sill. There are several marine railways for small craft at Long Beach Harbor.

(415) **Communications.**–Los Angeles and Long Beach Harbors have connections to the extensive freeway system which connects the cities of Los Angeles and Long Beach and their suburbs; four U.S. or Interstate highways extend from the area freeway system to the N, S, and E. The harbors are served by three major railroads and many airlines. The harbors are ports of call for many foreign and domestic steamship lines and by coastal barge lines.

(416) While the Ports of Los Angeles and Long Beach are separate entities, their harbor facilities are closely interrelated.

(417) **Small-craft facilities.**–The major small-craft facilities in Long Beach are Long Beach Marina in Alamitos Bay and the Downtown Marina on Queensway Bay, W of oil Island Grissom. Other facilities in Long Beach Harbor are just inside the entrances to both Channel Two and Channel Three. All repair facilities, supplies, fuel, moorage, and related yacht requirements may be had at individual private marinas or from other establishments in the Middle Harbor. Several boatyards are in Channel Two and Channel Three.

(418) Los Angeles Harbor has small-craft facilities on both sides of Cerritos Channel from the Heim lift bridge to East Basin, on the E side of East Basin, in Watchhorn Basin, and along the W side of West Channel. All the berths, fuel, supplies, and services required for small boats are available at the individual private marinas or may be obtained nearby.

(419) **Chart 18746.**–From Point Fermin the coast trends in a general W direction 6.5 miles to Point Vicente, and forms the N shore of San Pedro Channel, which is discussed in chapter 5. From Point Vicente the shoreline curves N. The coast is free of off-lying dangers and is well marked by kelp.

(420) The Traffic Separation Scheme between Point Fermin and Point Conception is discussed earlier in this chapter.

(421) Several submarine sewers extend 1.3 miles offshore near **White (Whites) Point,** 1.3 miles NW from Point Fermin.

(422) **Point Vicente,** 6.3 miles NW of Point Fermin, is a steep rocky cliff, 120 feet high, white and red in color, with red predominating. A rock awash is 250 yards SW from the point with kelp extending 100 yards farther to seaward. A small black 25-foot high pyramidal rock is close inshore 0.3 mile E of the point.

(423) **Point Vicente Light** (33°44.5'N., 118°24.6'W.), 185 feet above the water, is shown from a 67-foot white cylindrical tower on the SW end of the point; a fog signal is at the station.

(424) A **danger zone** for practice firing extends off Point Vicente. (See **334.940**, chapter 2, for limits and regulations.)

(425) **Charts 18740, 18744.–Palos Verdes Point,** 2 miles NNW of Point Vicente, is a bold, bluff point, 120 feet high, rising abruptly to the W extremity of Palos Verdes Hills. There are no dangers off the point, but heavy kelp extends 0.6 mile offshore and is marked by a lighted bell buoy 0.7 mile W of the point.

(426) **Lunada Bay** is a small bight on the S side of Palos Verdes Point. **Resort Point** forms the S side of this bay.

(427) **Flat Rock Point,** 1.7 miles NE of Palos Verdes Point, is on the S side of Santa Monica Bay. A narrow spur protrudes from the otherwise rounded point. **Flat Rock,** 6 feet high, and **Bit Rock,** 5 feet high, are 175 yards and 250 yards, respectively, off the end of the spur. **Bluff Cove** is a shallow bight on the S side of Flat Rock Point. The beach is covered with boulders.

(428) **Santa Monica Bay** is formed by the curving coast between Point Vicente and Point Dume. From Flat Rock Point to Santa Monica the shore is comparatively low with a sand beach backed by a continuous city area to the inland mountains. The depths of Santa Monica Bay are comparatively shoal, the 10-fathom curve in general lying about 1 mile from shore, except at Redondo Beach where a deep submarine valley, **Redondo Canyon,** heads close to the shore.

(429) **Malaga Cove,** just N of Flat Rock Point, is used occasionally by fishing boats with local knowledge, but it is open to the prevailing W winds. Boats enter through a break in the kelp and anchor inside in 6 to 7 fathoms, with the S point of the cove bearing 207°.

(430) **King Harbor,** 4.5 miles NNE of Palos Verdes Point, is a large small-craft harbor at **Redondo Beach.** The harbor is used mostly by pleasure craft and accommodates upwards of 1,400 boats.

(431) **Prominent features**.–At the N end of King Harbor and about 200 yards inshore is a large powerplant with eight large smokestacks approximately in line and parallel with the beach. The four N stacks are the most prominent. The northernmost of these stacks is an excellent charted landmark. A private light is shown from atop the powerplant.

(432) **COLREGS Demarcation Lines.**–The lines established for Redondo Harbor are described in **80.1116**, chapter 2.

(433) The entrance is between two lights at the ends of the breakwaters at the S end of the harbor. A fog signal is at the light on the E side of the entrance. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM Channel 16. A lighted bell buoy is 230 yards SSW of the S end of the W breakwater. The channel is marked by private buoys, with lights at the entrances to Basins 1 and 2. Natural depths through the entrance are 27 to 30 feet with a depth of 8 feet in the three basins, except for an isolated depth of 6 feet in the northeasternmost channel of Basin 1. In March 1977, shoaling was reported on the S side of the entrance to Basin 3, and in June 1989, rocks awash were reported near the N side of the entrance to the basin.

(434) In February 1988, numerous uncharted sunken wrecks were reported in the harbor.

(435) **Harbor regulations**.–The harbor is administered by the city of Redondo Beach and is under the control of a harbormaster, who has an office near the entrance to Basin 2. Transients should contact the **harbormaster** for berth assignments. The harbor patrol operates from Basin 2. Both the harbor office and the patrol monitor radiotelephone VHF-FM channel 16 and can be reached be telephone at 310-318-0632.

(436) **Supplies**.–There is a fuel dock that has gasoline and diesel fuel; most other small-craft supplies are available.

(437) A yacht club is in Basin 3.

(438) **Repairs**.–A boatyard here can handle craft up to 50 feet and 60 tons for all general repairs.

(439) **Caution**.–The city of Los Angeles advises that under certain tidal conditions, underwater installations between King Harbor and Marina del Rey, seaward to 9 fathom depths, present possible hazards to surface navigation.

(440) Sport fishing barges usually anchor 1 or 2 miles offshore during the summer; caution is advised to avoid them.

(441) **Submarine oil seepage.**–About 1.5 miles off Redondo Beach, in the deep water of Redondo Canyon, there is a submarine oil seepage and the water surface is often covered with a film of petroleum. Gas bubbles have been reported in several locations in this vicinity. A second seepage 3.5 to 4 miles to the NW is more noticeable and more continuously in action. On calm days, globules and large blobs of oil have been seen projected clear of the water surface. Gas also escapes continuously in large bubbles often 3 to 6 inches in diameter.

(442) **Hermosa Beach** and **Manhattan Beach** are between Redondo Beach and El Segundo; both have public fishing piers with fish havens covered 10 feet around their seaward ends. The pier at Hermosa Beach is about 1.3 miles N of Redondo Beach and extends about 350 yards from shore; a private fog signal is at the outer end. The Manhattan Beach pier, 2.5 miles N of Redondo Beach, extends almost 300 yards from shore.

(443) A 915-foot rock groin, marked at its seaward end by a private light, is about 2 miles N of Manhattan Beach. Submerged oil pipelines, marked by private buoys, extend from shore N and S of the groin. Two multi-buoy sea berths with submerged hoses load and discharge tankers. The terminal is operated by Chevron U.S.A. A private lighted bell buoy is about 1.5 miles W of the groin. On shore, just S of the groin, is a power plant with four prominent stacks.

(444) **El Segundo,** 1 mile inshore from the groin, has extensive oil refineries. Nearly 100 large oil tanks on the high ground are prominent. An aerolight is 2.5 miles inshore at El Segundo. Two 334-foot striped stacks, 0.7 mile S, are very conspicuous charted landmarks. Two anchorages have been established 2 miles WSW of El Segundo for vessels awaiting berthing assignments at the offshore terminal. Vessels requiring to use these anchorages must first contact the Vessel Traffic Information Service on channel 14 VHF-FM for assignment, and further instructions.

(445) A **restricted area** extends about 7 miles offshore at El Segundo. (See **162.195**, chapter 2, for limits and regulations.)

(446) **Caution.**–Mariners should use caution when navigating over the sewer outfalls that extend seaward from El Segundo. The existence of the submerged sewer outfalls present a hazard to all types of craft.

(447) **Marina del Rey,** 7.6 miles NNW of Redondo Beach and King Harbor, is a large manmade small-craft harbor. It has a capacity for over 6,000 pleasure craft.

(448) **COLREGS Demarcation Lines.**–The lines established for Marina del Rey are described in **80.1118**, chapter 2.

(449) A detached breakwater parallel to the shore is just to seaward of the jetties protecting the entrance channel.

(450) **Channels.**–A dredged entrance channel leads NE from the detached breakwater for about 0.7 mile, then the harbor channel continues N for about 0.6 mile to the N end of the harbor. There are two openings between the jetties and the detached breakwater. In March 2000, good depths were available in both openings. The chart is the best guide. The ends of the jetties should be given wide berths. In 1999 - March 2000, the controlling depths in the entrance channel between the jetties were 9.1 feet, except for lesser depths along the edges, thence 9.5 feet in the harbor channel; thence in March 2000, depths of 10 feet were available in the basins off the harbor channel. Shoaling of 2.5 to 9 feet existed up to 350 feet off the end of the jetties. The N and S ends of the detached breakwater and the outer ends of the jetties are marked by lights. A fog signal is at the light on the outer end of the N jetty. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(451) A **restricted area** governing navigation inside the detached breakwater has been established. (See **162.200**, chapter 2, for limits and regulations.)

(452) **Traffic separation lanes** have been established in the entrance channel to Marina del Rey. These lanes are marked by State Waterway Regulatory Buoys with the words “No Sail.” All vessels under power, or power and sail, shall keep these buoys to their port when entering or departing the harbor. The center lane between the buoys is used by vessels solely under sail, both entering or departing the harbor.

(453) A **special anchorage** is in the upper reach of the harbor channel. Anchoring is permitted only during storm, stress, or other emergency. (See **110.1 and 110.111**, chapter 2, for limits and regulations.)

(454) **Coast Guard.**–A search and rescue craft is stationed at the pier just S of the harbor office, on the E side of the bend in the entrance channel.

(455) **Harbor regulations.**–The harbor is administered by the Los Angeles County Department of Beaches and Harbors. The

Harbormaster, under the Los Angeles County Sheriffs Department, has an office on the E side of the bend in the entrance channel. Guest berths are available further down the channel at Burton Chace Park.

(456) The Sheriff's Harbor Patrol operates the office on the E side of the entrance channel, providing 24-hour service. Radiotelephone VHF-FM channel 16 is monitored on a 24-hour basis, and the Sheriff's Department can be reached by telephone at 310-823-7762.

(457) **Supplies.**–Marine supplies of all kinds can be obtain at most of the marinas and repair yards. Gasoline and diesel fuel are available at the fuel docks. Several yacht clubs are on the shores of the various basins. Medical facilities are available at the harbor, and a hospital is nearby.

(458) **Repairs.**–There are two boatyards in the harbor that have hull and engine repair facilities. The largest lift can handle vessels to 100 tons.

(459) Fish havens, marked by private buoys, are about 1.1 miles W of the light at the N end of the detached breakwater.

(460) About 1 mile N of the entrance to Marina del Rey is the 1,100-foot-long Los Angleles city public fishing pier at Venice; a fish haven covered 10 feet is around its seaward end. Lights mark the pier over its entire length, and a private fog signal is at the end. The Marina del Rey harbormaster advises that in dense fog the pier fog signal is occasionally mistaken for Marina del Rey entrance. The characteristics of these fog signals should be checked to avoid this error.

(461) A **144°40'-324°40' measured nautical mile** is off Marina del Rey. The S range is two triangular white and orange markers located at the midpoint of Marina del Rey detached breakwater. The N range is an orange and white triangle located on the centerline of Los Angeles city public fishing pier.

(462) **Santa Monica,** 3.5 miles NW of Marina del Rey, has a large pleasure pier, but there is no water commerce. A private fog signal is on the outer end of the pier. A 0.3-mile-long breakwater, submerged at high tide and marked on each end by private buoys, is off the outer end of the pier and parallel to the beach. A lighted bell buoy is about 550 yards S of the breakwater.

(463) The city of Santa Monica Harbor Patrol maintains a temporary office on the large pleasure pier. VHF-FM channels 12 and 16 are monitored on a 24-hour basis. A rescue boat is on call for emergencies.

(464) The buildings and structures along the beach are prominent. Most conspicuous from offshore are the tall General Telephone Building with a red and white antenna on top, and the clock tower atop a bank building.

(465) The 16-mile coast between Santa Monica and Point Dume is bold, rocky, and rugged. Steep cliffs rise abruptly from the water's edge, ascending gradually within 3 or 4 miles to the summits of the Santa Monica Mountain Range, about 3,000 feet high. The seaward termination of this range is at Point Mugu, 14 miles W of Point Dume.

(466) **Kellers Shelter,** 9 miles W of Santa Monica at **Malibu Beach,** is an open bight offering protection from N and W winds in 2 to 7 fathoms, sandy bottom. A reef marked by kelp extends a short distance offshore about 0.5 mile W of the anchorage.

(467) A fishing and pleasure pier, 700 feet long with 15 feet of water at its outer end, is on the W side of Kellers Shelter. Twin white buildings are prominent marks at the outer end of the pier. Private mooring buoys are maintained E of the pier for the use of sport fishing boats which leave for the nearby fishing grounds. Frequently the headlights of automobiles on the highway along the beach are directed toward the sea.

(468) **Paradise Cove,** 2 miles NE of Point Dume, affords protection similar to Kellers Shelter. The anchorage is abreast the fourth break or arroyo in the cliffs from Point Dume, and is immediately outside the kelp line, in 6 to 7 fathoms, sand bottom, with Point Dume bearing 240°. Kelp should be avoided because of possible dangers. A 300-foot sport fishing pier is on the NW side of Paradise Cove. A rescue vessel is moored in Paradise Cove.

(469) In November 1985, hazardous submerged pilings were reported about 300 yards SSW of the fishing pier in about 34°01.1'N., 118°47.1'W.

(470) **Point Dume** is the seaward end of a rather low plateau that terminates in a dome-shaped head, about 200 feet high, rising from a bold rocky bluff. The bluff is reddish, with white cliffs E and W. A small bare rock is 150 yards S of the point, and a reef that uncovers is 150 yards farther out. Foul ground extends about 500 yards E of the reef. A lighted bell buoy is 0.5 mile off the point.

(471) A rescue boat is moored at **Zuma Beach,** about 1 mile NW of Point Dume. The rescue boat can be contacted through the Coast Guard or the lifeguard station, which monitors VHF-FM channel 16, from 0900-1700 daily; call sign, Bay Watch.

(472) **Dume Canyon** (see also chart 18740) is a submarine valley with extremely steep slopes running about 0.3 mile offshore from Point Dume, and extending NW roughly parallel to the beach. Moderately strong currents of a confused directional nature have been observed in the vicinity of this submarine valley.

(473) **Chart 18720.**–The 14-mile coast between Point Dume and Point Mugu is very rugged, and there are no known outlying dangers. About 2 miles E of Point Mugu, on the beach at the foot of a very high bluff, is a 140-foot sand dune. This is quite prominent and can be made out on clear moonlit nights. The dune is charted as a "prominent slide."

(474) **Point Mugu,** the seaward termination of the Santa Monica Mountains, is prominent because of the lowland of the Santa Clara Valley to the W. The cuts and fills of the highway which skirt the shore from Point Mugu E are prominent. Aluminum-colored twin tanks, 1.5 miles NW of the point and on the W slopes of Laguna Peak, show well from SE through W. A pipeline runs from the tanks to a prominent white radar structure atop Laguna Peak. The tanks and the pipeline are marked by flashing red lights.

(475) **Weather, Point Mugu**.–Fog hampers visibilities most often from July through December, when the fog drops below 0.5 mile on about 5 to 8 days per month; September is usually the worst month. N through NE winds are common from October through March, while W winds prevail from April through September. While gales are infrequent, wind gusts have reached 50 to 60 knots from fall through spring. These strong winds often blow out of the ENE. Calm conditions are frequent all year round, but particularly from May through October.

(476) **Caution.**–The U.S. Navy advises navigation interests and others that continuous guided-missile firing operations may take place in the Pacific Missile Range, Point Mugu, Calif., Sea Test Range, Monday through Sunday. The test area extends for 170 miles in a SW direction from Point Mugu and is up to 100 miles wide. The specific danger portions of the firing area are broadcast daily Monday through Friday at 0900 and 1200 on 2638 kHz and

2738 kHz. (See Eleventh Coast Guard District Local Notice to Mariners for additional information.)

(477) A **danger zone** for Navy small-arms firing range extends about 2 miles offshore at Point Mugu. (See **334.1120**, chapter 2, for limits and regulations.)

(478) **Mugu Canyon** is a submarine valley with its head near Mugu Lagoon. The 50-fathom curve is about 0.5 mile offshore.

(479) **Santa Barbara Channel** is discussed in chapter 5.

(480) **Chart 18725.–Point Hueneme** (pronounced: y-nee-me), 22 miles WNW of Point Dume is low, rounding, and sandy. It is the outermost point of the low land of the Santa Clara Valley.

(481) **Point Hueneme Light** (34°08.7'N., 119°12.6'W.), 52 feet above the water, is shown from a 48-foot white square tower on the point. A fog signal is on the point about 70 yards SW of the light. A fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. A sewer outfall line, about 1.4 miles SSE of Point Hueneme Light, extends about 1 mile from shore.

(482) **Weather, Point Hueneme**.–In the coastal waters from Point Hueneme to Santa Barbara, sea fog hampers navigation most often from July through October. It is generally more widespread and often more persistent than land (radiation) fog. Visibilities fall below 0.5 mile (0.9 km) on about 5 to 10 days per month during these months; August and September are usually the worst.

(483) **Port Hueneme** is an inland basin, about 1,400 feet long by 1,200 feet wide, located at the head of a submarine canyon, **Hueneme Canyon.** It is under the control of the U.S. Navy, Naval Construction Battalion Center. The SE part of the basin is owned by the Oxnard Harbor District and is operated as a deep-draft commercial terminal. The commercial terminal is used by cargo vessels; commercial and sport fishing craft; and oil company support vessels, which operate from here to offshore drilling rigs.

(484) **Prominent features.**–The most prominent objects around the shores of the harbor are two red and white striped stacks at a powerplant, 2.4 miles SE of the harbor, are prominent, and the aerobeacon at Oxnard, 3 miles N of the harbor, is a good night mark.

(485) **COLREGS Demarcation Lines.**–The lines established for Port Hueneme are described in **80.1120**, chapter 2.

(486) A **Safety Fairway** leading to the channel has been established. (See **166**, chapter 2, for limits and regulations.)

(487) **Channel.**–The dredged channel leads between two jetties and through a land cut into the basin. The outer ends of the jetties are marked by lights. A lighted whistle buoy is about 800 yards SW of the outer end of the E jetty. Lighted buoys and a **037°** lighted range mark the channel.

(488) A Federal project provides for a depth of 36 feet in the entrance channel and 35 feet in the basin. Mariners are advised that between periodic dredging, depths in the channel and basin are subject to change due to minor silting. Vessels with deep drafts are advised to consult with the Port Hueneme Pilots Association (805-984-4933) concerning the available depths prior to vessel arrival. General guidelines call for under-keel clearances of 3 feet for inbound vessels and 2 feet for outbound vessels, taking tidal height into consideration. The narrowest width of the entrance channel is 330 feet. However, because of prevailing fresh winds only one-way traffic is permitted for large ships. The pilots control the traffic direction.

(489) **Anchorage.**–There is no anchorage area in the harbor basin because of space limitations. The recommended anchorage for deep-draft vessels is about 1.7 miles S of Port Hueneme Light. This location offers little protection in heavy weather.

(490) **Tides and currents.**–The mean range of tide at Port Hueneme is 3.7 feet, and the diurnal range of tide is 5.4 feet. A range of about 9 feet may occur on days of maximum tides. The lowest low water is about 1.6 feet below mean lower low water. The harbor is not affected by tidal streams or currents, however, cross currents do occur near the entrance to the harbor, and are not predictable.

(491) **Pilotage, Port Hueneme**.–All commercial vessels 300 gross registered tons and over, entering, leaving, or shifting within the Port of Hueneme, including the area of the Oxnard Harbor District, must be piloted by a port pilot duly licensed to perform the services of piloting vessels within the Port. The Oxnard Harbor district does not maintain pilots. Requests for pilots may be made by calling the Port Hueneme Pilots Association, telephone 805-984-4933. Pilots are available on a 24-hour basis and board vessels from a tug at a point 1.5 to 2.0 miles from the seabuoy. When pilots are boarding, vessels should stay on the range line and reduce speed to 5 knots or less.

(492) Pilot ladder should be rigged on the lee side (normally starboard while inbound, port side outbound) amidships, about 5 feet above the water. Pilot ladder should be rigged well away from any overboard discharge. At night, the ladder must be properly lighted.

(493) Access to and from the ladder to the deck of the ship should be through a break in the rail, or if the ladder tends over the rail, then steps should be provided on the inboard side to permit access back to the deck level. Manropes should NOT be rigged, when boarding a Pilot, coming from sea.

(494) A proper ringbuoy (with light and line attached) should be provided at the boarding area. The harbor pilots guard VHF-FM channel 16. Vessels are cautioned to remain a safe distance off-shore when calling pilots because dock space must often be cleared.

(495) **Towage.**–Tug service for the port is furnished by a private tug company. Requests for service may be made by telephone, (805) 986-1600. Tugs up to 2,400 hp are available on a 24-hour basis.

(496) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(497) **Quarantine** is enforced in accordance with regulations of the U.S. Public Health Service. (See Public Health Service, chapter.)

(498) **Customs.**–Port Hueneme is a U.S. Customs port of entry, telephone (805) 488-8574.

(499) **Agricultural quarantine.**–All vessels from outside of California that dock at Port Hueneme, except those specifically exempt, must be inspected by U.S. Department of Agriculture and/or the Ventura County Department of Agriculture. There are local representatives in the Oxnard area.

(500) **Harbor regulations.**–The U.S. Navy exercises overall Port Control Authority. Port Hueneme, Control One, is on duty at all times, and monitors VHF-FM channel 6; the Oxnard Harbor District is responsible for its commercial operations. The Wharfinger is on duty at all times and guards VHF-FM channel 14; the Wharfinger office is at the E end of Slip A, along with the pilot and tugboat offices. Entrance to the Naval Construction Bat-

talion Center is restricted, and no photography is permitted without clearance.

(501) No garbage, waste, or refuse shall be discharged in any manner from any vessel in accordance with the California Administrative Code, a copy of which is available at the port's main administrative building. A 5-knot **speed limit** is enforced in the harbor.

(502) **Wharves.**–Oxnard Harbor District has three 600-foot long deep-draft berths (Wharf No. 1) and two 700 foot -long deep- draft berths (Wharf No. 2). There is also a shallow depth wharf at the W end of the port property adjacent to the entrance channel. It is 379 feet long with 15 to 18 feet alongside.

(503) Wharf No. 1: 1,800 feet long; 35 feet alongside; deck height, 14 feet; three refrigerated warehouses providing 169,731 square feet of covered storage; 15 acres of open storage; more than 36,000 additional square feet of warehouse and office space immediately adjacent to the waterfront; three 60-ton vehicular weight scales; and Central Gate; operated by Oxnard Harbor District.

(504) Wharf No. 2: 1,450 feet long; 35 feet alongside; deck height, 14 feet; 96,000 square feet of warehouse; 10 acres of open storage; operated by Oxnard Harbor District.

(505) **Supplies.**–Water and most marine supplies are available. Bunker fuel from dockside pipeline at commercial berths and diesel oil are obtainable.

(506) **Repairs.**–Minor repairs may be made in the port. Machine shops in Ventura and Oxnard are qualified for normal voyage repair work.

(507) **Communications.**–Oxnard has good rail, air, and highway connections with Los Angeles and points N.

(508) **Channel Islands Harbor,** 1 mile NW of Port Hueneme and 5.8 miles SE of Ventura Marina, is a small-craft harbor. It is used by pleasure and sport fishing vessels and has existing berthing facilities for over 2,400 boats.

(509) **COLREGS Demarcation Lines.**–The lines established for Channel Islands Harbor are described in **80.1122,** chapter 2.

(510) **Channels.**–The entrance to Channel Islands Harbor is between two jetties protected by an offshore breakwater. Each end of the breakwater and both the seaward and inshore ends of both jetties are marked by lights. A fog signal is at the seaward end of the S jetty. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(511) The area SE of the entrance is subject to rapid and uncertain shoaling. Mariners should exercise caution when approaching the harbor from the S, especially at night.

(512) The entrance channel leads NE from the breakwater then turns N into the entrance basin. In June 2001, the controlling depth was 13.7 feet in the entrance channel; thence in 1986-1994, 16 feet in the entrance basin and 11 feet in the inner basin.

(513) **Coast Guard.**–The Channel Islands Harbor Coast Guard Station is just S of the harbormaster's office. Search and rescue vessels are stationed here.

(514) **Harbor regulations.**–The harbor is administered by the Harbor County Department, Ventura County, and is under control of a **harbormaster**, who has an office on the E side of the harbor about 400 yards N of the first bend in the channel. The harbor office maintains guest berths for 70 craft. Transients should report to the harbormaster for berth assignments. The harbormaster guards VHF-FM channel 16 24 hours a day. Harbor patrol boats operate from the office.

(515) **Supplies.**–Gasoline and diesel fuel are pumped at a fueling dock on the E side of the harbor just N of the harbor office. Water, ice, and most marine supplies are available.

(516) **Repairs.**–Two full-service marine repair yards are on the E side of the channel, about 0.5 mile N of the harbormaster's office. Mobile lifts can handle craft to 25 tons, and a fixed lift can handle vessels to 60 tons.

(517) A **147°51'–327°51' measured nautical mile** is off the breakwater and beach just N of the harbor entrance. The S range is marked by the breakwater S light and the S jetty light. The N range is marked by less visible poles on the beach.

(518) A row of cottages extends NW along the beach for 2 miles from Point Hueneme. From the point, low sand beaches and dunes trend NW for 9 miles to the mouth of **Ventura River.**

(519) A striped 209-foot stack having a bright flashing red light on top is 0.6 mile N of **Mandalay Beach** and is conspicuous throughout the area. A private lighted buoy is 1.1 miles W of the stack, and a group of mooring buoys are about 0.3 mile E of the lighted buoy. A submarine pipeline runs from the mooring buoys to shore.

(520) **Ventura** is 8.5 miles N of Point Hueneme on **Pierpont Bay.** It has a 1,960-foot fishing pier with about 19 feet of water at the outer end, and about 18 feet at the inner end of a 250-foot loading face.

(521) Freshwater is piped to the pier, and gasoline is available in the town.

(522) Two fish havens are about 2.3 miles SW and 1.7 miles S, respectively, from Ventura Pier.

(523) Small craft may anchor anywhere in Pierpont Bay, but the anchorage is unprotected and is not recommended except for short day use. Boats may obtain moorage at Ventura Harbor.

(524) The most prominent features around Ventura are the lighted microwave tower, atop a hill 1.8 miles NE of the seaward end of Ventura Pier, and the tall Holiday Inn Motel (sign lighted at night), about 300 yards W of the pier. Also prominent are the railroad trestle crossing Ventura River, just W of town, and **Padre Junipero Serra Cross,** on a 350–foot hill immediately NW of the center of town. There are several aluminum-colored tanks and many oil derricks high up the slopes of the hills NW of town.

(525) **Ventura Harbor,** 6.7 miles N of Point Hueneme and just N of Santa Clara River, is a small-craft harbor used by pleasure craft and commercial fishing vessels. It has existing berthing facilities for about 1,500 boats. Commercial fish handling facilities are available in the harbor. In February 2001, a submerged rock was reported in about 34°15.3'N., 119°16.4'W. Caution is advised.

(526) **COLREGS Demarcation Lines.–**The lines established for Ventura Harbor are described in **80.1124**, chapter 2.

(527) The entrance to Ventura Harbor is between two jetties protected by a 1,800-foot detached breakwater. The S end of the breakwater and the seaward ends of both jetties are marked by lights. A fog signal is at the S jetty light. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16.

(528) Dangerous breakers can develop in the approach area to the entrance channel in winter when the prevailing winds are from the W. Inbound and outbound vessels are advised by local interests to run a direct course between Ventura Entrance Lighted Whistle Buoy 2V and the breakwater entrance.

(529) **Channels.**–The dredged entrance channel leads NE between the jetties, then turns E into the harbor. In September 2001, the controlling depths were 13.1 feet (18.7 feet at midchannel) in

the entrance to the harbor; thence in March 2000, the reported controlling depth was 14 feet in the channel extending to the S end of the harbor. The private buoys in the entrance channel and harbor are not charted because the positions are changed frequently due to the shifting shoals. Mariners are advised to exercise extreme caution and to contact the harbormaster for the latest channel and harbor conditions prior to entering. The water area N of the entrance and E of the detached breakwater is not navigable because of sandbars and shoals.

(530) A channel leads NE from the N part of the harbor to a private waterfront home development called **Ventura Keys.** In March 2000, depths of 14 feet were reported in the development.

(531) **Harbor regulations.**–Ventura Harbor is administered by the Ventura Port District and is under the control of a **harbormaster,** who has an office on the point N of the entrance basin. Transients should report to the harbormaster for guest slip assignments. The harbormaster monitors VHF-FM channels 16 and 12, from 1800 to 0200 daily.

(532) **Supplies.–**Gasoline and diesel fuel are available just E of the harbormaster's office and at the S end of the harbor. Water, ice, and marine supplies are available. Two yacht clubs are on the shores of the harbor.

(533) **Repairs.–**Boatyards in the harbor have mobile lifts that can haul out vessels to 150 tons for hull and engine repairs. Electronic service is also available.

(534) From Ventura River, the **Santa Ynez Mountains** extend to Point Conception and Point Arguello. For 11 miles W from the river to Rincon Point the coast is very rugged; elevations of over 2,000 feet being found within 1 mile of the beach. The dangers do not extend over 0.5 mile from the beach which is well fringed with kelp. Between Ventura and Santa Barbara are several small towns, and the highway and railroad skirt the shore; retaining walls are a common feature.

(535) **Pitas Point,** 5.5 miles NW of Ventura, is the first bold point W of Ventura River. A very steep gulch is on the W side. E of the point is 1 mile of beach cottages. High on the steep slopes above the cottages are the derricks and tanks of an oil field. Aluminum-colored tanks and oil-processing plants are prominent 1 mile E of the point.

(536) A fish haven, marked by a buoy, is about 1.4 miles SE of Pitas Point.

(537) **Punta Gorda,** 9 miles NW of Ventura, is low at its outer extremity, but rises rapidly to prominent **Rincon Mountain.** E of the point is a long pier supporting several oil pumps. Oil tanks are conspicuous on the outer end of the pier. Tanks and numerous derricks are along the highway just E of the pier. W of this pier a causeway extends S from Punta Gorda for 0.5 mile to an artificial island used for oil operations. A private light and fog signal are on the island.

(538) **Rincon Point,** 11 miles NW of Ventura, is low and sandy. **Sand Point,** 3.5 miles W of Rincon Point, is low and rounding, with the narrow opening to **El Estero,** a lagoon of no importance lying close under and E of it. A rock that uncovers is 550 yards offshore from Sand Point. Oil-drilling platforms are off Sand Point.

(539) A Standard Oil installation is prominent on the E side of **Carpinteria,** 8 miles E of Santa Barbara. A submerged pipeline leads to offshore oil drilling platforms and to mooring buoys about 0.6 mile offshore where tankers are loaded. A pier is used to load support boats operating to and from the oil platforms. Many storage tanks are back of and on each side of the pier. One tank with an aluminum-colored dome may be seen from seaward.

(540) **Ortega Hill,** just W of **Summerland** and 18 miles NW of Ventura, is 250 feet high and conspicuous because of the extensive cuts for the highway; from offshore it has the appearance of a large slide.

(541) **Santa Barbara,** 29 miles NW of Point Hueneme, is a resort city and popular yachting harbor. The harbor is used mostly by pleasure craft and fishing vessels. There are about 1,200 slips in the harbor.

(542) **Santa Barbara Light** (34°23.8'N., 119°43.4'W.), 142 feet above the water, is shown from a 24-foot white tower about 2 miles W of the harbor entrance. **Lavigia Hill,** 0.6 mile NE of the light is 459 feet high and the distinguishing feature in approaching Santa Barbara from the E or W.

(543) Submerged shellfish structures are about 0.7 mile SE of Santa Barbara Light in about 34°23'15"N., 119°42'45"W.

(544) **Santa Barbara Point,** 1 mile E of the light, is a high cliff at the SE limit of the narrow tableland extending from Lavigia Hill. The point is the beginning of a sand beach extending 0.6 mile E to **Point Castillo,** the W point of the breakwater forming Santa Barbara Harbor.

(545) Conspicuous landmarks are the neon-lighted hotel tower on the beach 1 mile E of the town, the several radio towers, and the many residences on the hillsides back of the town. At night the lights of Santa Barbara are prominent from the channel, but they are obscured from the W by Lavigia Hill.

(546) **COLREGS Demarcation Lines.**–The lines established for Santa Barbara Harbor are described in **80.1126,** chapter 2.

(547) The harbor has a 500-yard breakwater extending NE from **Point Castillo** to an extensive sandbar which forms the S side of the harbor. A jetty extends across the sandbar about 400 yards N from the NE end of the breakwater. A light and a fog signal mark the connection between the breakwater and the jetty. The fog signal can be activated upon request to the Coast Guard by radiotelephone VHF-FM channel 16. The NE side of the harbor is formed by **Stearns Wharf.** A light is at the S end of the wharf. A groin, about 125 yards long and marked at its S end by a light, extends S from shore about 0.3 mile W of Stearns Wharf. At night, sometimes the lights are difficult to see against the background of city lights.

(548) **Channels.**–A dredged entrance channel leads NW between the breakwater and Stearns Wharf then turns SW into the harbor. The channel is marked by buoys. The harbor buoys are not charted because their positions are frequently changed. The entrance and harbor are subject to rapid shoaling. The harbormaster advises that the entrance channel has a tendency to shoal after SE storms. Mariners should contact the harbormaster on 2182 kHz or on VHF-FM channel 16 for channel conditions and assistance in entering.

(549) **Anchorage.**–A special anchorage area is in the basin behind the breakwater. (See **110.1 and 110.115,** chapter 2, for limits and regulations.) Anchoring inside the harbor is usually prohibited by the harbormaster. Anchoring is prohibited within 300 feet E of Stearns Wharf and within 0.5 mile E of the wharf from December through March. Anchorage may be had inside the kelp, but large vessels should anchor outside of it in better holding ground. The harbormaster desires advance requests for permission to anchor.

(550) **Caution.**–The long sandbar N of the breakwater light is inconspicuous on a high-tide night, but the masts of boats

moored in the harbor are quite visible over the breakwater. The **harbormaster** reports that these circumstances have caused several groundings on the sandbar when strangers making for the harbor at night failed to identify the breakwater light, failed to see the sandbar, but sighted the masts in the harbor and steered toward them, consequently going hard aground on the sandbar. The shoreline of the sandbar is subject to continual change. **Caution** should be exercised when entering at night; the buoyed channel should be carefully followed.

(551) **Weather, Santa Barbara**.–Fog plagues the harbor most often from August through November, when it reduces visibilities to less than 0.5 mile (0.9 km) on 4 to 7 days per month. Morning is usually the worst time. Winds are often calm at Santa Barbara. Winds of 3 knots or less occur 18 percent of the time or more year round, and 25 to 40 percent of the time from September through March. The sea breeze helps reduce this percentage. These spring and summer winds are mainly out of the E through WSW. NE winds, common throughout the year, are the most frequent winds from November through February, though a distant second to calm conditions.

(552) **Coast Guard.**–A Coast Guard rescue vessel is stationed at the city pier in the SW part of the harbor, and a Coast Guard Marine Safety Detachment is on the W side of the harbor.

(553) **Harbor regulations.**–Santa Barbara Harbor is administered by the City of Santa Barbara Water Front Department and is under the control of a **harbormaster,** who has an office at the SW corner of the harbor. Transients should report to the harbormaster for guest slip assignments. The office monitors VHF-FM channel 16, and can be reached by telephone 805-546-5530.

(554) The harbor patrol is on 24-hour duty and monitors VHF-FM channel 16. Strangers desiring assistance entering the harbor will be assisted by a patrol boat as needed when requested.

(555) **Sterns Wharf** had alongside depths of 5.1 feet at the foot and 18.6 feet at the head in May 2000. The City Pier, inside the harbor, has diesel fuel, gasoline, commercial ice, water, and a hoist with a maximum lift of two tons. The area east of the wharf is reported to be heavily congested.

(556) **Supplies.**–Marine supplies are available.

(557) **Repairs.**–There is a boatyard on the SW side of the basin that can handle craft up to 25 tons and 50 feet for hull and engine repairs. A small floating drydock in the harbor can lift craft up to 20 tons for hull maintenance and repair. And there are several boat builders and repair yards in the city of Santa Barbara.

(558) **Communication** is by rail, motor vehicle, and by airplane. The Santa Barbara Municipal Airport is at **Goleta,** 7 miles W of the harbor.

(559) A **081°58'–261°58' measured nautical mile** is 300 yards E of Stearns Wharf. The ranges are marked by white daymarks on telephone poles.

(560) **Chart 18721.**–The 8-mile coast from Santa Barbara W to Goleta Point consists of bluffs 30 to 100 feet high with short stretches of sand beach and is fringed with kelp 0.2 mile offshore.

(561) **Goleta Point,** 6.2 miles W of Santa Barbara Light, is low and terminates in a cliff about 30 feet high. The buildings of the University of California at Santa Barbara are conspicuous just N of the point and are dominated by a lone tower. The aerolight 1.5 miles N and the two lighted radio towers 1.5 miles NE of the point are good marks at night. A 1,475-foot pleasure pier is in the bight E of the point. A 4-ton hoist is available.

(562) The 32-mile coast from Goleta Point to Point Conception is more rugged than that E. **Canada de la Gaviota,** 12 miles E of Point Conception, is a conspicuous break in the mountains back of this coast. A railroad skirts the shore over trestles and embankments which cross the mouths of numerous gulches and arroyos. The kelp grows quite heavily, and in some places extends over a mile offshore. The Pacific Coast Highway parallels the coast from Santa Barbara to Gaviota, where it turns inland.

(563) Oil well production heads covered 6 fathoms or more and submerged pipelines to shore extend as much as 3 miles offshore between Goleta Point and Point Conception. Several oil-well structures in the area are lighted and equipped with racons and fog signals.

(564) An offshore oil drilling platform and a storage and treatment vessel mooring area are about 13 miles W of Goleta Point in about 34°23'27"N., 120°07'14"W. (Platform Hondo) and 34°24'19"N., 120°06'00"W. The platform and mooring area are in **safety zones.** (See **147.1 through 147.15, 147.1105, and 147.1106,** chapter 2, for limits and regulations.)

(565) Temporary drilling platforms can be found along this coastline and may be moved periodically. Mooring buoys for tankers are SW of Coal Oil Point and S of Gaviota.

(566) **Coal Oil Point,** 1.8 miles W of Goleta Point, is low and may be distinguished by the strong odor of petroleum discharged by a spring. This odor is noticeable over 2 miles offshore.

(567) Pilings of former piers and ruins of a drilling rig may exist from Coal Oil Point for about 2.5 miles NW to the pier at **Ellwood**. The private 2,300-foot pier is owned by Arco Oil. Passage without local knowledge is not advisable.

(568) A rock covered 13 feet is 3.7 miles W of Coal Oil Point and 0.9 mile offshore; it is surrounded by kelp. A reported rock covered 4 fathoms is 3.3 miles S of **San Augustine.** This rock is the outermost danger along the N side of the Santa Barbara Channel.

(569) **Capitan,** 7.5 miles W of Coal Oil Point, is in a small bight which offers little protection to small craft. A lone tank stands on a bare hill 500 feet high and 0.3 mile inland.

(570) **Refugio Beach** at **Orella,** 2.5 miles W of Capitan, is a State Park for camping at the mouth of the canyon. A small bight here offers some protection for small boats in northwesterly winds in about 15 feet.

(571) Oil is loaded from a submerged pipeline at **Gaviota,** 13.5 miles E of Point Conception. A number of large green storage tanks mark the inshore end of the pipeline. About 1 mile W of Gaviota is a State beach park with a 545-foot pleasure-fishing pier. An electric hoist for launching skiffs is available. The railway trestle along the beach is quite prominent.

(572) **Cojo Anchorage,** 1.5 miles E of Point Conception, affords protection off the mouth of the Cojo Valley from moderate W and NW winds. The suggested anchorage is opposite a culvert under the railroad tracks in 5 to 10 fathoms, hard sandy bottom. The cove 1.7 miles E of this anchorage known as Little (Old) Cojo, is foul and affords little protection.

(573) **Point Conception,** 118 miles NW of Point Fermin and at the W end of Santa Barbara Channel, is a bold headland 220 feet high that marks an abrupt change in the trend of the coast. There is comparatively low land immediately behind it. At a distance from N or E, it usually looks like an island.

(574) Point Conception has been called the **Cape Horn of the Pacific** because of the heavy NW gales encountered off it during the passage through Santa Barbara Channel. A marked change of

climatic and meteorological conditions is experienced off the point, the transition often being remarkably sudden and well defined. When the northwesterly winds are strong they blow down the canyons between Point Conception and Capitan and cause heavy offshore gusts.

(575) **Point Conception Light** (34°26.9'N., 120°28.2'W.), 133 feet above the water, is shown from a 52-foot white tower behind a building near the W part of the point; a fog signal is at the station. A low black rock, nearly awash at high tide, is 220 yards offshore, SW of the light.

(576) **Danger zones** extend offshore from Point Conception to Point Sal. (See **334.1130,** chapter 2, for limits and regulations.)

(577) **Safety zones** have been established around oil drilling platforms in 34°27'19"N., 120°38'47"W. (**Platform Hermosa**) and 34°28'09.5"N., 120°40'46.1"W. (**Platform Harvest**) (See **147.1, 147.10, 147.1101, 147.1109, and 147.1110,** chapter 2, for limits and regulations.)

(578) From Point Conception, the coast trends in a gentle curve NW for 12 miles to Point Arguello and consists of bold rocky cliffs, 100 to 400 feet high. The coast railroad runs along these cliffs and through several tunnels.

(579) The 100-fathom depth curve off Point Arguello, and to a lesser extent off Point Conception, is characterized by a succession of indenting deeps or gorges. In following the curve during thick weather with an echo sounder, these submarine features should be found extremely useful.

(580) **Espada Bluff** is a prominent cliff 378 feet high, 5.5 miles NNW of Point Conception. The cliffs on each side drop sharply to less than 100 feet in height.

(581) **Tranquillon Mountain,** near the seaward end of the Santa Ynez Mountains, is prominent in clear weather. It terminates in Rocky Point, Point Arguello, and Point Pedernales.

(582) **Rocky Point,** 1.2 miles S of Point Arguello, has numerous detached rocks extending in some cases 300 yards offshore.

(583) **Point Arguello** is a narrow, jagged, rocky projection, extending about 800 yards W of the general trend of the coast. An outlying rock is about 200 yards seaward. The extremity of the point overhangs the water's edge, and about 200 yards inshore the point is nearly divided by gullies on the N and S sides. These form a saddle which, from N and S, looks like two heads. **Point Arguello Light** 34°34'37"N., 120°38'55"W.), 100 feet above the water, is shown from a 20-foot high post on the W end of the point.

(584) **Weather, Point Arguello**.–Off Point Arguello, sea fog becomes a persistent and frequent navigational hazard. The cool California Current is responsible for a sudden increase in fog frequencies. These fogs are often thick, and Point Arguello is considered by mariners to be one of the most dangerous areas along the coast. The observing station at Point Arguello, 371 feet (113 m) above mean sea level, records an annual average of twice as many days with visibilities less than 0.5 mile (0.9 km) as at any location farther S. From June through October, visibilities drop below 0.5 mile (0.9 km) on about 12 to 20 days per month; July and August are the worst months. During August the fog signal is operating more than 30 percent of the time, compared to 17 percent at nearby Point Conception.

(585) **Chart 18687.–Lake Mead,** Arizona-Nevada, is a National Recreation Area on the **Colorado River** impounded by **Hoover Dam** (36°01.0'N., 114°44.2'W.). **Restricted** and **anchorage areas** established by Federal regulations are in Lake Mead. (See **110.1, 110.127, and 162.220,** chapter 2, for limits and regulations.) Additional information may be obtained from the local office of the National Park Service, U.S. Department of the Interior, 601 Nevada Highway, Boulder City, Nev. 89005.

(586) Eleventh Coast Guard District Local Notice to Mariners contains information concerning boating events, boating safety, bridge construction and lighting, aids to navigation, and anchorages on the Colorado River, Lake Mead National Recreation Area, and Glen Canyon National Recreation Area. These notices may be obtained, free of charge, by making application to Commander, Eleventh Coast Guard District. (See appendix for address.)